



Superfund Removal Procedures

Action Memorandum Guidance

EPA Region 5 Records Ctr.



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**SUPERFUND REMOVAL PROCEDURES
ACTION MEMORANDUM GUIDANCE**

**Office of Emergency and Remedial Response
U.S. Environmental Protection Agency
Washington, D.C. 20460**

As the day-to-day managers of removal responses conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), On-Scene Coordinators (OSCs) are responsible for a variety of activities. Among the most basic, yet highly important tasks, is the preparation of Action Memoranda, more commonly referred to as Action Memos.

An Action Memo provides a concise written record of the decision selecting a removal action. It describes the site's history, current activities, and health and environmental threats; outlines the proposed actions and costs; and documents approval of the proposed action by the proper Headquarters' or Regional authority. An addendum to the Action Memo, which is not part of the decision to select a removal action, sets forth the enforcement strategy.

An adequate Action Memo, however, must be more than a summary of past, current, and proposed activities. It must document consideration of the factors affecting the removal decision. Specifically, the Action Memo must substantiate the need for a removal action based upon criteria in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Because Action Memos are the primary decision documents to select and authorize removal actions, they are the critical component of the administrative record. The importance of a well-prepared Action Memo cannot be overstated. The following pages outline the minimum requirements for Action Memos, presenting illustrative exhibits and examples when appropriate.



Preparing Action Memos is an integral part of an OSC's job.

TABLE OF CONTENTS

List of Exhibits	vi
Key to Symbols.....	vii
Action Memoranda.....	1
Action Memorandum Purpose.....	1
The Action Memo as Part of the Administrative Record for Selection of the Removal Action. ...	1
Action Memorandum Roles and Responsibilities	3
Model Action Memorandum.....	6
Overview.....	6
Model	8
Action Memoranda for Special Circumstances.....	26
Overview.....	26
Combined Removal and Statutory Exemption Requests	26
Action Memoranda to Continue Response Actions	30
Action Memoranda Supplements.....	41
Action Memoranda Attachments	41
Role of Headquarters Addenda.....	42
Review and Approval Procedures.....	44
Need for Review.....	44
Resources for Review.....	44
Approval and Concurrence Procedures	50
Appendix A. References	
Appendix B. Key Words Index	

LIST OF EXHIBITS

**Exhibit
Number**

1	Administrative Record Requirements For Time-Critical Removals	2
2	Administrative Record Requirements For Non-Time-Critical Removals.....	3
3	Action Memo Roles and Responsibilities.....	4
4	Basic Action Memo Outline	7
5	Sample Removal Project Ceiling Estimate.....	22
6	Information Requirements for Removal and 12-Month or \$2 Million Exemption Request Action Memos.....	27
7	Information Requirements for Action Memos to Continue Responses	32
8	Sample Project Ceiling Increase Estimate	37
9	Review Checklist.....	45
10	Concurrence for Nationally Significant or Precedent-Setting Removals.....	52

KEY TO SYMBOLS

Three types of symbols appear throughout this document to assist readers with obtaining additional information on certain topics or focus attention on specific points. Each of the three symbols is described below. In addition, footnotes and cross-references are used to provide further clarification.

Bracketed numbers [#] appear in the text and exhibits and correspond to specific references in Appendix A. This appendix provides a comprehensive list of supporting guidance documents that may be consulted for more detailed explanations of removal program procedures or policies affecting the preparation of Action Memos. Appropriate sections of statutes and regulations are also cited throughout the text, with a full citation of each statute and regulation appearing in Appendix A.

The remaining two symbols are used in the model Action Memo portion of this document (see pp. 8-25) to highlight specific information to include in Action Memos. Information that the OSC must include in all Action Memos is denoted by the symbol ♦. Other information requirements outlined in the model, but not accompanied by this symbol, should be discussed as appropriate given the circumstances of the removal. Information required for Action Memos that is also needed for entry into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is indicated by the symbol ©. This symbol is intended to help OSCs flag items for CERCLIS, so they can then distribute copies of the Action Memo to data coding staff for coding onto a CERCLIS Removal Information Form or a Site Information Form.

NOTICE

The procedures set out in this document are intended solely for the guidance of Government personnel. They are not intended, nor can they be relied upon to create any rights enforceable by any party in litigation with the United States. EPA officials may decide to follow the guidance provided in this document, or to act at variance with the guidance, based on an analysis of site circumstances. The Agency also reserves the right to change this guidance at any time without public notice.

ACTION MEMORANDA

Action Memorandum Purpose

An Action Memo serves as the primary decision document substantiating the need for a removal response, identifying the proposed action and explaining the rationale for the removal. An Action Memo also reserves funds for a removal response, which are then activated by a signed delivery order. OSCs must prepare an Action Memo for all Fund-financed removal actions prior to the start of a response, or after the fact for removals initiated under an OSC's \$50,000 authority.

If circumstances change, supplemental Action Memos may be required later in the response to support the need to continue a removal action beyond 12 months, to increase the total project ceiling, to increase the total project ceiling beyond \$2 million, to change the scope of the removal action, or combinations thereof. To initiate a removal action where, at the outset, the project is expected to exceed 12 months in duration or the total cost of the project is expected to exceed \$2 million, the OSC must prepare an Action Memo that justifies the need to undertake a removal and also meets the statutory exemption criteria from these limits.

Each Action Memo to initiate a removal must follow the standard model discussed in this guidance to ensure completeness (see p. 6). Instructions on how to cover the special circumstances noted above are supplied as well.

The Action Memo as Part of the Administrative Record for Selection of the Removal Action

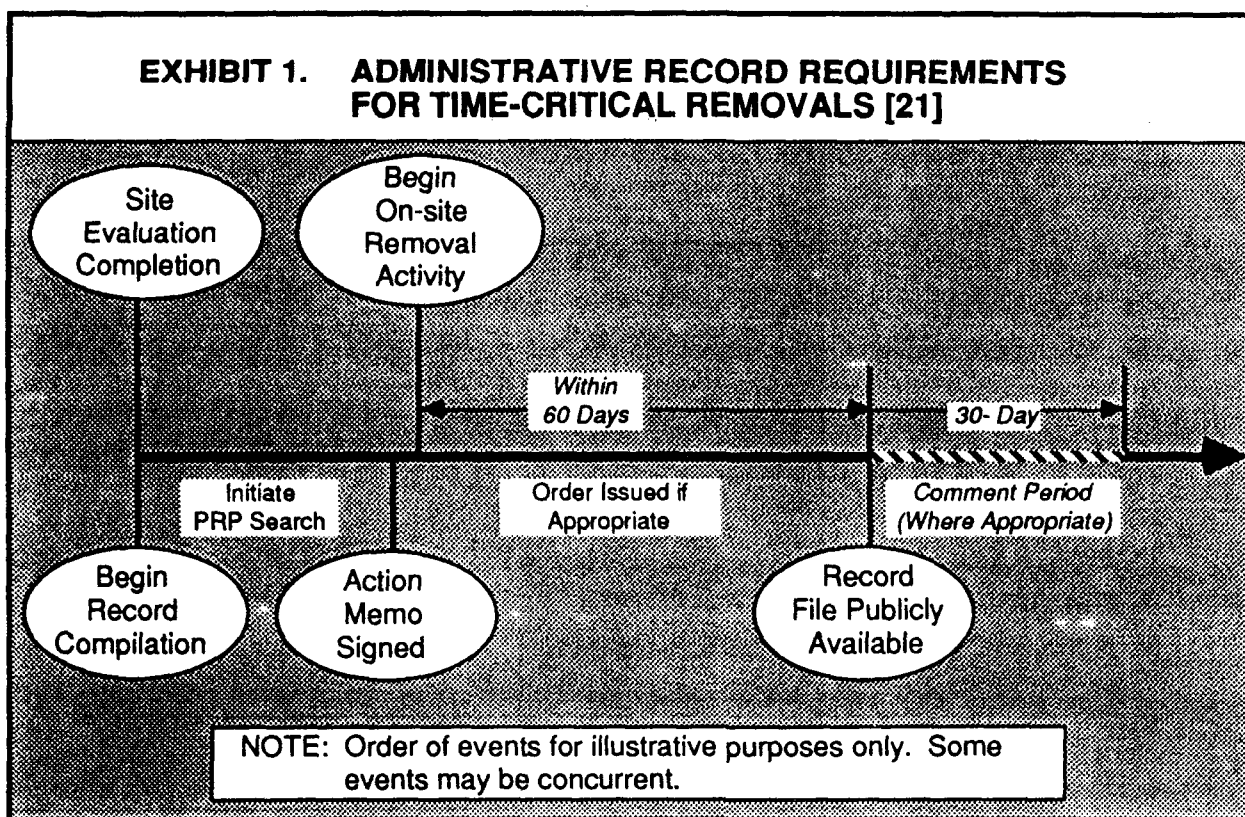
The Action Memo is the critical component of the administrative record because it is the primary decision document for a removal response [21]. Section 113(k) of CERCLA, as amended, requires the establishment of an administrative record for the selection of a CERCLA response action. The administrative record is the body of information used by the Agency to select a response action. *The administrative record serves two purposes:*

- First, it is the basis for judicial review of any issues concerning the selection of a response action. Because a proposed removal action must be supported by the administrative record, the OSC must ensure the adequacy of the administrative record in the event the decision is challenged, such as in a subsequent cost recovery case.
- Second, EPA, through access to the administrative record, provides for public participation, whenever practical, in Superfund decisions, with opportunity as appropriate for comment on the response action selection.

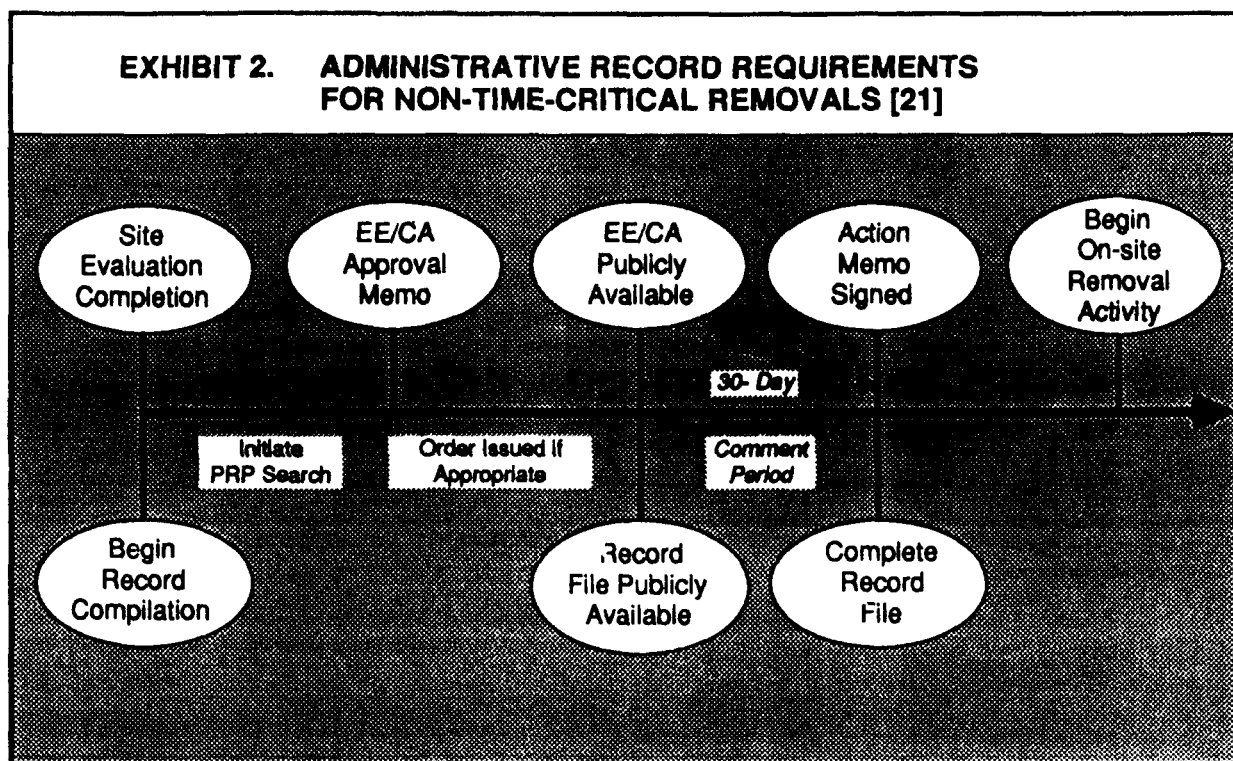
OVERVIEW

To meet both of these requirements, the administrative record must contain all documents used by the Agency in making its decision to undertake a removal action. As the primary decision document, the Action Memo must demonstrate consideration of the factors affecting the removal decision. Action Memos that do not adequately substantiate the need for a removal action or the selected cleanup method can undermine the Agency's case for a cost recovery action.

Public availability requirements for the administrative record for a removal action as set forth in section 300.820 of the NCP are affected by the urgency of the situation and the preparation of decision documents. The administrative record file for *time-critical removal actions*, including emergency responses, must be made available for public inspection no later than 60 days after the initiation of on-site activity. Public comment periods should be held in appropriate situations at the time the record file is made available. Exhibit 1 illustrates this process for time-critical removals. Although the signing of the Action Memo generally signifies the completion of the response selection decision making, documents relevant to the response may be added to the record file later in certain situations as described in the NCP.



For non-time-critical removal actions, a 30-day public comment period is required on the Engineering Evaluation/Cost Analysis (EE/CA) and any supporting documentation at the time the EE/CA is made available for public comment [1]. The administrative record file must be made available for public inspection at the same time the EE/CA is made available. Exhibit 2, on the next page, illustrates this process for non-time-critical removals.



Action Memorandum Roles and Responsibilities

Regions

OSCs must prepare Action Memos for all Fund-financed actions conducted under removal authority. OSCs should include the Office of Regional Counsel (ORC) or Regional enforcement coordinators in every decision to initiate a removal. In all situations, OSCs should strive to ensure the completeness and accuracy of Action Memos and document conclusions with available information. For instance, OSCs should use attachments to the Action Memo where appropriate to provide additional supporting information. When possible, OSCs should also involve appropriate staff from TSCA, RCRA, and other Agency programs in the removal documentation process. Regional roles and responsibilities are detailed in Exhibit 3, on the next page.

Generally, draft Action Memos should be routed through Regional management for programmatic review and to ensure that proposed removal actions are managed within the Regions' removal advice of allowance as recorded in CERCLIS. Concurrence and/or approval from various Regional program managers is also required in certain situations. OSCs should arrange for Regional review of the Action Memo and must alert Headquarters in a timely fashion of all Action Memos requiring Headquarters' approval. Specific Regional review and approval responsibilities are discussed later in this document (see p. 44). In addition, OSCs may want to provide completed Action Memos to personnel in Regional Public Affairs offices to facilitate public notice efforts.

OVERVIEW

EXHIBIT 3. ACTION MEMO ROLES AND RESPONSIBILITIES	
ON-SCENE COORDINATOR	<ul style="list-style-type: none"> • Prepares all Action Memos • Alerts the ERD Regional Coordinator to Action Memos requiring Headquarters' approval • Provides copies of all Regionally approved Action Memos to ERD Regional Coordinator • Arranges for review of draft Action Memos by other EPA personnel • May approve Action Memos for up to \$50,000 for emergency removals
REGIONAL REMEDIAL PROJECT OFFICER	<ul style="list-style-type: none"> • Concurs in writing on the use of the consistency exemption when a site is proposed for or listed on the NPL
REGIONAL COUNSEL/ REGIONAL ENFORCEMENT PERSONNEL	<ul style="list-style-type: none"> • Reviews all Action Memos • Reviews enforcement section of Action Memos
REGIONAL ADMINISTRATOR	<ul style="list-style-type: none"> • Approves all Action Memos for removals less than \$2 million and subsequent ceiling increases to \$2 million (except for nationally significant or precedent-setting non-NPL removals) • Approves all Action Memos for removals exceeding 12 months
ERD REGIONAL COORDINATOR	<ul style="list-style-type: none"> • Coordinates the concurrence process for Action Memos requiring Headquarters' concurrence/approval • Advises (upon request) on the preparation of all Action Memos • Prepares addenda as necessary and/or advises Regions on preparation of such addenda
DIRECTOR, ERD	<ul style="list-style-type: none"> • Approves the use of innovative or emerging alternative technologies, and technologies with uncertain development status • Reviews/concurs on all Action Memos requiring Headquarters' approval/concurrence
DIRECTOR, OERR	<ul style="list-style-type: none"> • Concurs on nationally significant or precedent-setting actions at non-NPL sites • Reviews/concurs on all Action Memos requiring AA, OSWER approval
AA, OSWER	<ul style="list-style-type: none"> • Approves all \$2 million exemption requests and subsequent ceiling increases
OFFICE OF WASTE PROGRAMS ENFORCEMENT	<ul style="list-style-type: none"> • Concurs on exemption requests
OFFICE OF GENERAL COUNSEL	<ul style="list-style-type: none"> • Concurs on exemption requests, and on nationally significant or precedent-setting actions

Action Memos must also be prepared for removals to be conducted by potentially responsible parties (PRPs). An Action Memo for an enforcement-lead removal need not include estimated costs or authorization for funding, but in all other respects it should look the same as a Fund-lead Action Memo. Because of the difference between the two with regard to costs and funding, Regions may designate an enforcement-lead memo as "Action Memo/Enforcement."

Regions may use a Fund-lead Action Memo they have already prepared as documentation for an enforcement-lead case. Some Regions have found a Fund-lead Action Memo, with estimated costs and authorization for funding, to be useful in negotiations to indicate EPA's resolve to go ahead if the PRP does not act. Regions may initiate negotiations with PRPs prior to drafting an Action Memo, but a completed Action Memo (or Action Memo/Enforcement) must be in hand by the time an order is issued to a PRP.

As with Fund-lead removals, the timing for preparing the Action Memo/Enforcement will depend on the urgency of the action. In time-critical situations, it may be necessary for the PRP to initiate action prior to the preparation of an Action Memo or enforcement order.

Headquarters

Regional Coordinators in the Emergency Response Division's (ERD) Response Operations Branch are available to provide assistance in preparation for and/or during a removal action, including the preparation of Action Memos. ERD personnel also occasionally prepare addenda to Action Memos to clarify or supersede information contained in the Action Memo (see p. 42). The Office of Waste Programs Enforcement (OWPE) is available to provide assistance in preparing enforcement addenda for Action Memos (see p. 24). In addition, senior managers at Headquarters concur on or approve Action Memos under certain circumstances, as described later in this document (see p. 50). Exhibit 3 provides further detail on Headquarters' roles and responsibilities.

MODEL ACTION MEMORANDUM

Overview

An Action Memo is used to initiate all Fund-financed removals, or is prepared after the fact for those begun under the OSC's \$50,000 authority. Because Action Memos can affect future policy (e.g., precedent-setting actions, attaining specific cleanup levels), OSCs themselves, not response action contractors, must prepare all Action Memos, including drafts. Action Memos for removals initiated under the OSC's \$50,000 authority must be prepared and approved by the OSC within one week after the start of removal actions, depending on the extent of mitigation efforts. OSCs should send copies of \$50,000 Action Memos to their appropriate Regional management representative and Regional Coordinator, and place a copy in the site file.

Action Memos to initiate a removal follow a standard format outlined on the following pages. *OSCs must cover all of the topics presented in the outline to demonstrate that the incident meets statutory, NCP, and delegations requirements for removals.* For removal actions determined at the outset to exceed \$2 million or 12 months in duration, the original Action Memo should also substantiate the need for a statutory exemption, as discussed later in this guidance [8].

Exhibit 4, on the next page, presents the basic outline for Action Memos. The exhibit is followed by a model Action Memo that addresses the major statutory, regulatory, policy, and program requirements affecting removal decisions. Abbreviated examples are provided for additional guidance; however, more detailed statements are expected in actual Action Memos.

EXHIBIT 4. BASIC ACTION MEMO OUTLINE

Heading

- I. Purpose
 - II. Site Conditions and Background
 - A. Site Description
 - 1. Removal site evaluation
 - 2. Physical location
 - 3. Site characteristics
 - 4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant
 - 5. NPL status
 - 6. Maps, pictures, and other graphic representations
 - B. Other Actions to Date
 - 1. Previous actions
 - 2. Current actions
 - C. State and Local Authorities' Role
 - 1. State and local actions to date
 - 2. Potential for continued State/local response
 - III. Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities
 - A. Threats to Public Health or Welfare
 - B. Threats to the Environment
 - IV. Endangerment Determination
 - V. Proposed Actions and Estimated Costs
 - A. Proposed Actions
 - 1. Proposed action description
 - 2. Contribution to remedial performance
 - 3. Description of alternative technologies
 - 4. EE/CA
 - 5. ARARs
 - 6. Project schedule
 - B. Estimated Costs
 - VI. Expected Change in the Situation Should Action Be Delayed or Not Taken
 - VII. Outstanding Policy Issues
 - VIII. Enforcement
 - IX. Recommendation
- Enforcement Addendum
- Attachments

MODEL ACTION MEMO

[Regional Letterhead]

MEMORANDUM

DATE: Month, day, year

SUBJECT: Request for a Removal Action at _____ Site, City,
County, State

FROM: Name, OSC

TO: Regional Administrator (RA) or designee (or to the file, through the RA, if
the response is initiated under the OSC's \$50,000 authority and will not
exceed that cost)¹

THRU: Regional Division Director, as appropriate

Site ID #: __ [2 digit number]

I. PURPOSE

- ◆ Provide a statement of purpose indicating the type of action being requested (e.g., approval of a removal action or a ceiling increase), the site's name and location (including exact street address with zip code if available), the name of the lead respondent if there is an enforcement order, whether the response was initiated under the OSC's \$50,000 authority, and, for non-NPL sites, if there are any nationally significant or precedent-setting issues associated with the response (if so, attach the concurrence memo shown in Exhibit 10 on p. 52):

Example: - The purpose of this Action Memo is to request and document approval of the proposed removal action described herein for the _____ site, City, County, State.

II. SITE CONDITIONS AND BACKGROUND

- ◆ Identify the 12-digit CERCLIS ID number² and the category of removal (i.e., emergency, time-critical, non-time-critical). Provide an overview of the site's history and current characteristics. Indicate the nature of the contamination and describe the information obtained in the removal site evaluation. Ensure that the information contained in this section provides an accurate assessment of current site conditions, using relevant supporting data where possible.

¹ Regional routing instructions may vary.

² Some emergencies may not have CERCLIS ID numbers.

A. Site Description

1. Removal site evaluation

- ◆ © Discuss the history of the incident or release, including the time, date and location of the incident, the type of incident that occurred, and the facts concerning the discovery of the release.
Examples:
 - *Train derailment resulted in tank rupture and vapor release.*
 - *A storage lagoon in the south corner of the site overflowed due to heavy rains.*
 - *Drums washed up on the beach and were reported by park rangers.*
- Indicate that if a preliminary assessment (PA), Superfund site investigation (SSI), or listing site inspection (LSI) has been conducted for the site, regardless of the site's status on the National Priorities List (NPL), substantial background information may already exist.
- ◆ • List all of the site's key problem areas.
Examples:
 - *Stacked drums*
 - *Bulked liquids*
 - *Lagoons*
 - *Contaminated soils.*

2. Physical location

- ◆ © Describe the site's physical location in terms of surrounding land use, population size, and distances to nearest populations and other reference points.
Examples:
 - *A school is within 1/4 mile of the site.*
 - *There are 1,000 residences within 1 mile of the site, 10 of which are adjacent.*
 - *The area is mainly suburban residential with some light industrial areas.*
- ◆ © Describe adjacent areas in terms of vulnerable or sensitive populations, habitats, and natural resources [5].
Example:
 - *The site is adjacent to wetlands and a tributary to the Red River flows nearby.*

3. Site characteristics

- ◆ © Describe the current use of the site, the nature and type of facility, and business activities that may have or are currently contributing to the incident.
Examples:
 - *The site was a sanitary landfill that accepted industrial wastes.*
 - *The site has been used for a midnight dump of PCB wastes.*
 - *There is an operating metal fabrication facility on the site.*
- Indicate if the site is a Federally-owned facility, identify the operators of the facility if other than the Federal Agency, and describe the type of facility. (Note: DOD and DOE have the responsibility to conduct all responses at their facilities. Fund-lead removals may only be conducted at other Federal facilities in cases of emergency.)
Example:
 - *The spill occurred on National Park Service land and required an emergency removal.*

MODEL ACTION MEMO

- Indicate if a State or local government body is an owner or operator (Note: this is particularly important if an NPL site is involved because of the need for cost sharing by the State or local government.)
- ♦ • Indicate whether this is the first removal at the site or a restart. If the removal is a restart, previous actions should be described in section II.B of the Action Memo.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

- ♦ © List materials known on-site and whether they are hazardous substances as defined by section 101(14) of CERCLA, or pollutants or contaminants as defined by section 101(33) of CERCLA.
- ♦ • Provide estimates of the quantities involved, identify the source of information, and refer to sampling and analytical data.
Examples:
 - *Site records and conversations with the plant manager indicate that 10 drums of PCB-contaminated sludge are buried on-site.*
 - *Preliminary sampling has found drinking water to exceed the removal action level for toluene at two residences.*
- Highlight substances of critical concern such as PCBs and dioxins (if the information is presented in chart form, identify the substance, quantity, location, and any existing standards for comparison). Explain all data presented.
- Identify any unique characteristics of the materials involved, such as mixed or radioactive wastes.
- ♦ • Describe the mechanism for the past, present, or future release; observable or probable migration route(s) of contaminants; and the basis for this determination. Common routes of exposure include fire/explosion and resulting emissions, human contact, and soil contamination that could lead to ingestion or contamination of ground or surface water. Discuss site features or characteristics, weather conditions, human events, or other conditions that would either cause, spread, or accelerate the release of materials. Describe the rate of release and physical properties of the substance that influence or determine the form and speed at which it travels. Support these descriptions with documentation, as appropriate.
Examples:
 - *Substantial fire/explosion hazard and fumes would drift into nearby neighborhood.*
 - *Transformer lying on its side has been drained of PCB-contaminated oil; surrounding surface soil is heavily stained, and is readily accessed by children.*
 - *Vegetation on the north bank of the stream, approximately 50 yards below the ruptured tank, is dead.*

5. NPL status

- ◆ © State whether or not the site is listed on the NPL. If it is an NPL site, indicate whether or not remedial activities are in progress or when remedial action is expected (note that contribution to remedial performance is discussed in the "Proposed Action" section) [24].

If it is not an NPL site:

- Note whether or not the site has been proposed for the NPL.
- State whether or not it has received, or is expected to receive, a Hazard Ranking System (HRS) rating and indicate the score, if available. Also note whether it is being evaluated by the Agency for Toxic Substances and Disease Registry (ATSDR) for the need to dissociate residents from threats.
Example: - The site received an HRS of 46.5 in June 1989.
- Indicate whether or not the site is being referred to the site assessment program.
Example: - The site has been referred to the site assessment program for a site investigation.

6. Maps, pictures and other graphic representations

- Refer to attached pictures, diagrams, maps, and/or sketches if they substantiate the conditions at the site and strengthen the background section of the memo, and provide them as an attachment.

B. Other Actions to Date

1. Previous actions

- Describe any government or private actions (including community relations) that have been undertaken in the past and not previously discussed. Include both CERCLA and any other responses conducted previously, such as spill responses under section 311 of the Clean Water Act or private party cleanup attempts.
- Indicate the dates, costs, and effectiveness of these actions.

2. Current actions

- Describe any other government or private activities that currently are being performed but have not been previously discussed. Indicate the dates, costs, and effectiveness of these activities.
- Discuss how proposed EPA actions will relate to current activities described above.

MODEL ACTION MEMO

C. State and Local Authorities' Roles

1. State and local actions to date

- Indicate whether the State and/or local governments requested EPA assistance and the name of specific agencies/officials making the request.
Example: - *The State Department of Natural Resources sent a letter to the EPA Regional office describing threats posed by leaking aboveground storage tanks at ABC site.*
- Summarize any "first responder" or other actions these or other agencies have taken to protect public health and the environment. Note the date and effectiveness of such actions.
Examples: - *Local government evacuated a one-square mile area.*
- *Police were posted on February 10 to restrict public access, and no further vandalism has occurred.*
- Indicate State/local government cooperation in assessing the release/threat, and whether State/local personnel remain at the site.

2. Potential for continued State/local response

- Describe actions State/local government personnel are taking and their future roles.
Examples: - *Site security provided by State highway patrol.*
- *Water main hookups to be installed by local water authority.*
- Indicate specifically:
 - Whether the State is able to obtain funds or must delay the response for an unacceptable period of time to provide funding
 - Whether the State/locality will fund the removal or require funding
 - Whether the State will lead the response under a cooperative agreement [17].

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

- ◆ © Explain how this incident meets the requirement of a threat to public health or welfare or a threat to the environment³ for initiating a removal. *For the two sections below,*

³ CERCLA section 104(a) authorizes removal responses "whenever (A) any hazardous substance is released or there is a substantial threat of such a release into the environment, or (B) there is a release or substantial threat of release into the environment of any pollutant or contaminant which may present an imminent and substantial danger to the public health or welfare." Note that removals are not allowed under section 104(a)(3) of CERCLA when there is a release or threat of release: of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found; from products which are part of the structure of, and result in exposure within, residential buildings or business or community structures; or into public or private drinking water supplies due to deterioration of the system through ordinary use. EPA may respond, however, to these situations when an emergency exists and no other authority can respond in a timely manner.

discuss only those threats that will be addressed by the removal action, beginning with the most serious, and relate the discussion to appropriate statutory and regulatory authorities.

A. Threats to Public Health or Welfare

- Detail the threats to public health or welfare as they relate to the criteria (provided below) from section 300.415(b)(2) of the NCP. Attach and refer to or incorporate any final ATSDR⁴ health consultations or site-specific health advisories, or other health risk advice, and explain any deviations from final ATSDR documents.
 - Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain. Identify substances of concern, realistic exposure scenarios, and how the levels of hazardous substance(s) exceed site-specific action level(s), and/or acute, and if appropriate, chronic toxicological standards. Tailor the description to the concentrations of contaminants on the site and receptors. Describe any reports of human health effects (e.g., illness, injury, or death) that appear linked to the exposure and describe any effects of human exposure.

Examples:

 - *Volatilization of hazardous substances contained within the deteriorating building threatens surrounding residents with airborne exposure.*
 - *It is estimated that residents within a 2-mile radius may be exposed to toxic fumes at substantial levels in the event of an explosion/fire.*
 - *Studies have identified nausea and respiratory dysfunction as the primary health effects.*
 - Actual or potential contamination of drinking water supplies. Identify the substances of concern, realistic exposure scenarios explaining how the water supply is threatened, and the immediacy and gravity of the threat. Describe the location of the affected aquifer and its use. Indicate if the numeric removal action levels for drinking water are exceeded in the aquifer or site-specific factors otherwise indicate that a significant health threat exists.

Examples:

 - *Degreasers and other solvents dumped on the ground have migrated through the soil, contaminating 14 wells downgradient of the site.*
 - *Samples taken within a 2-block radius showed the removal action level for barium is exceeded at the tap in four houses.*
 - Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release. Identify the substances of concern and estimate their quantities; and describe the number, type, and conditions of containers. Provide realistic exposure scenarios based upon site conditions and the proximity of sensitive or nearby populations. Describe the effects of human exposure.

Examples:

 - *The chemicals are contained in 2 leaking 5,000 gallon pressure vessels located on deteriorating concrete pads. An elementary school is located 1/4 mile away.*

⁴ ATSDR should be consulted for emergencies and emergency criteria exemptions involving contaminated soil, and may also be consulted for exemption requests involving drinking water and radiation. The OSC should ensure that EPA's proposed actions and ATSDR findings are consistent.

MODEL ACTION MEMO

- *There are approximately 10 uncovered drums surrounded by a partially collapsed chain-link fence on the site, which is crossed by a footpath frequently used by neighboring residents to get to the train station.*
- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate. Identify the substances of concern, estimated amounts, realistic pathways and exposure scenarios, and how the levels exceed standards. Describe the soil characteristics, the extent of the contamination, and factors that may affect migration.
Examples:
 - *The hazardous substances were dumped in a 20-ft. square area and have penetrated the top soil to a depth of approximately 1 foot. The aquifer is 6 feet below the surface and contamination would create a substantial plume.*
 - *The residue from the lagoon lies on top of a hardpacked clay surface, with contaminants migrating from the site in stormwater runoff to a nearby stream used for drinking water.*
- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released. Describe the conditions of concern and provide an estimate of the likelihood of their occurrence. Explain how these conditions would affect exposure scenarios and migration.
Examples:
 - *Spring floods carried an estimated 20 barrels and more than 50 drums of volatile organics into the Green River, the drinking water source for more than 5,000 people. Further flooding is predicted.*
 - *Before containment measures are implemented, heavy summer cloud-bursts may wash pollutants across the concrete yard and into municipal storm sewers. This could affect a nearby watercourse used for swimming.*
- Threat of fire or explosion. Identify the substances of concern, and realistic exposure scenarios including the gravity and immediacy of the threat. Be specific about the number of people exposed, the proximity of sensitive or nearby populations, and the geographic area affected.
Examples:
 - *The site contains nearly 30 drums of non-compatible volatile organics stored next to each other. A hospital is less than four blocks away.*
 - *Vandals have set two fires at the unsecured site, necessitating evacuation of five rowhouses adjacent to the drum storage area.*
- Other situations or factors that may pose threats to public health or welfare.

B. Threats to the Environment

- Detail the threats to the environment as they relate to the criteria provided below from section 300.415(b)(2) of the NCP (discuss only those categories of threats that apply to existing or potential conditions):
 - Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby animals or the food chain. Identify the substances of concern, probable exposure pathways, evidence of prior animal exposures (either directly or through the food chain), and results of any available analyses. Relate the information to the contaminants of concern and the known or probable receptors. Report any known illness, injury, or death linked to the exposure.

Examples:

- Significant levels of dioxin were found in crayfish and sediment samples taken in Black Creek downstream of the storm sewer, which carries contaminated runoff from the site.
- Large fishkill (4 million) reported in 1986; potential repeat if 2-million gallon lagoon overflows again, releasing sludges and supernatant liquid.

- Actual or potential contamination of sensitive ecosystems. Identify the substances of concern, contaminant migration routes, and the immediacy and severity of the threat to sensitive ecosystems. Describe any ecosystem effects that appear to be linked to contaminant exposures.

Examples:

- Site is partly located in a wetland. Hazardous substances kill algae which are a critical part of the ecosystem. State has documented ground-water contamination.
- State Department of Natural Resources reports high levels of mercury and other heavy metals in fish in a nearby recreational lake, which receives stormwater runoff from this abandoned electroplating facility.

- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release. Describe the number, type, and condition of containers and identify the substances they contain. Estimate quantities of hazardous substances. Describe the known effects of these substances on plant and animal life.

Examples:

- Approximately 800 drums containing volatile organics, about half of which are damaged, are strewn across the southwest corner of the property. Vegetation in the vicinity of the drum site is dead.
- Pesticide residues are present in many open containers on the landfill surface. Deer have been observed walking through the landfill area and grazing nearby. These pesticides are toxic at these levels to deer.

- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate. Identify the substances of concern and the source(s) of any releases to the soil, estimate the extent of contamination, and describe probable exposure scenarios. Describe the soil characteristics and factors that may affect migration.

Examples:

- PCB contaminant levels in the soil at the property line exceed 200 ppm. A neighboring horse farm that has access to trails on-site is adjacent. Contaminants would be toxic to horses at these levels.
- Fugitive dust has been observed escaping the site during periods of high wind and moving towards the vicinity of a trout hatchery less than 1/4 mile downwind.

- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released. Describe the conditions of concern and the likelihood of their occurrence. Explain how these conditions contribute to contaminant migration or to likely exposures to plant or wildlife populations. Describe recurring weather patterns that create or aggravate threats to the environment.

Examples:

- Snow melt runs through the mine drainage area each spring, depositing tailings in Rush Creek, which is used for recreational fishing. Record snowfalls were reported in January and February.
- Heavy rains are expected to continue, which could result in a second lagoon overflow into the adjacent wetland when migratory bird populations are at their peak.

MODEL ACTION MEMO

- Threat of fire or explosion. Identify the substances of concern and the immediacy and severity of the threat. Describe any illness, injury, or death to flora or fauna resulting from fires or explosions. Describe the geographic area affected and any special environmental concerns.

Examples:

- *Hunters using the grounds of the abandoned chemical reclamation facility for target practice detonated discarded munitions, creating a fire that devastated more than 4 acres of the wildlife management area and killed an unknown number of birds and other wildlife.*
- *Reactive chemicals are stored haphazardly throughout the dilapidated warehouse, and in some instances are exposed to the elements, creating potential for explosion and fire. The nursery for the county arboretum is approximately 600 yards from the south wall of the warehouse.*

- Other situations or factors that may pose threats to the environment.

IV. ENDANGERMENT DETERMINATION

✦ All Action Memos must contain an endangerment determination. Depending on the types of substances involved, one of the following two statements must be used.

- For removals involving hazardous substances:

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

- For removals involving only pollutants or contaminants:

Actual or threatened releases of pollutants and contaminants from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

Explain proposed and alternative actions, and estimated costs for both proposed and alternative actions, and the project schedule. State how the action addresses the threat. Explain why obvious alternatives were determined not to be feasible.

Example:

- *Removal of waste solvents and off-site RCRA disposal is the only feasible solution for mitigating threats posed by the situation. Site stabilization without disposal would provide only a temporary solution to the threats posed by the site.*

A. Proposed Actions

1. Proposed action description

- ✦ © Describe the specific tasks involved in the proposed response to the public health, welfare, and environmental threats discussed in section III of the Action Memo. Be sure to describe the full extent of the removal, including ultimate disposition of contaminants, and explain what will be left at the site when the

removal is completed. Discuss the rationale for choosing the option and provide supporting data for the decision; state why the proposed actions are appropriate for this situation in light of the threats and explain how they achieve timely response and protection of human health and the environment. Describe the technical feasibility and probable effectiveness of the proposed action.

Examples:

- *Installation of an interceptor well will block the migration of contaminants and greatly reduce the threat of contaminating the stream bordering the site. Contaminated water will be treated on-site and discharged into the stream.*
- *Excavation of the contaminated soil and disposal in a RCRA-permitted landfill will mitigate the public health threat posed by direct human contact and inhalation of airborne particles.*

- State whether any further information is needed before all response actions can be decided and the approximate date when a final decision will be reached.

Example:

- *Further sampling to determine the extent of soil contamination will be completed within 30 days.*

- Ensure that the extent of contamination has been or will be verified by sampling and properly documented. Refer to the Sampling Quality Assurance/Quality Control (QA/QC) Plan and summarize the contents if necessary.

Examples:

- *EPA will use a split sampling technique.*
- *Water samples will be analyzed daily using automated sampling techniques.*

- Describe how any vulnerable or sensitive populations, habitats, or natural resources identified in section II.A might affect removal activities.

Example:

- *Location in a floodplain might hamper removal activities in spring.*

- Where known and appropriate, list other uncertainties affecting implementation of the proposed action.

Examples:

- *Mobile incinerators will not be available until next quarter.*
- *Steep slope of site may prevent permanent capping.*

- Discuss the need for and feasibility of relying on institutional controls at the State or local level, if applicable [23]. (Note: This is most important for removals involving excavation where contaminated soil remains below clean fill according to specific cleanup plans.)

Examples:

- *Deed restrictions are needed to prevent incompatible future activities.*
- *Prohibitions on drilling new water wells can be instituted at the County level.*

- © Describe available information concerning off-site disposal, such as the estimated quantity or type of waste(s) requiring off-site treatment or disposal, the facility selected, and the extent to which the substance can be treated.

Examples:

- *Five drums containing an unidentified mixture of solvents will require off-site disposal.*
- *Arrangements will be made for disposal of the 300 tons of contaminated soil at the ABC RCRA-approved facility.*

- State the intent to comply with the off-site policy when the type or amount of waste is not known, or indicate that compliance with the policy is not an issue at

MODEL ACTION MEMO

the site. For non-time-critical removals involving off-site disposal, indicate that the appropriate State environmental officials have been notified [22,6].

Example: - *Since the material is being stabilized on-site, off-site disposal is not required.*

- Discuss the need for provision of post-removal site control (PRSC) and note whether the State, local government, or the PRPs have agreed to provide for PRSC, if applicable. Identify any other agreement that exists to provide PRSC. (Note: as stated in section 300.415(k) of the NCP, OSCs are strongly encouraged to obtain a commitment to provide for PRSC when necessary before initiating removal activities that will require PRSC.) [16]

Example: - *Post-removal site control activities will be managed by the Regional remedial program.*

- Indicate if the scope of proposed work has changed as a result of public comment on the EE/CA for non-time-critical removals.

Example: - *Further drinking water sampling will be conducted in response to comments received at the public meeting.*

- Identify cross-media relationships and potential adverse impacts associated with intermediate steps.

Examples: - *Excavation of soils from highway shoulder will require traffic diversion and will be coordinated with local police.*
- *Local traffic and noise levels will increase during the response; therefore, hazardous substances will not be moved off-site during school bus operating hours.*

2. Contribution to remedial performance

- ♦ • Discuss how the proposed actions will, to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned [10]. For this discussion, document the conclusions resulting from consideration of the following questions:
 - What is the long-term cleanup plan for the site? For sites with signed Records of Decisions (RODs), briefly describe the remedial action selected. For proposed and final NPL sites where no remedial action has been selected, identify a range of feasible alternatives based upon a review of existing site information and professional judgment. For non-NPL sites where remedial plans are unknown or not anticipated, state that the proposed action will not impede future responses based upon available information.
 - Which threats will require attention prior to the start of the long-term cleanup if there is one? For proposed or final NPL sites, where remedial action is planned or likely, identify specific threats and explain why and how they must be addressed prior to long-term cleanup. For non-NPL sites with no long-term cleanup plans, refer to all threats meeting the NCP section 300.415(b)(2) removal criteria identified in section III of the Action Memo (see p. 12).

- How far should the removal go to ensure that threats are adequately abated? For proposed or final NPL sites, where remedial action is planned or likely, explain (1) which threats must be abated entirely and which must be stabilized to protect public health, welfare, and the environment until a permanent remedy can be effected and (2) how abatement or stabilization is accomplished by the proposed actions in section V of the Action Memo. For non-NPL sites where there are no plans for long-term remedial action, the threats that meet the NCP removal criteria should be completely cleaned up.
- Is the proposed removal action consistent with the long-term remedy, if known? Describe how the removal contributes to, or is at least consistent with, the permanent remedy. Explain if complying with contribution to remedial performance provisions conflicts with other program goals such as pursuit of PRP cleanup.

OR

- Note that no further action is required if the proposed removal action completes the cleanup, or if an emergency existed that precluded an analysis of how the removal related to long-term actions.

3. Description of alternative technologies

- Indicate what, if any, alternatives to land disposal have been considered [18]. If an alternative technology is selected as the proposed action, provide an in-depth description in Section V.A(1): "Proposed action description."
- Explain how the two objectives of the alternative technology policy - timely response and protection of human health and the environment - would be achieved by each alternative technology.
Examples:
 - *Bioremediation techniques in conjunction with site stabilization will protect the surrounding environment in a timely manner.*
 - *PCB incineration will effectively eliminate the threat to adjacent residences.*
- Explain how well each alternative technology meets the three alternative technology selection criteria (effectiveness, implementability, and cost).
Examples:
 - *Bioremediation would be less costly than other technologies, but its effectiveness on organic and heavy metal mixed contaminants is questionable.*
 - *Recycling of the liquid wastes is the least expensive disposal option.*
- Indicate ERD Director approval for technologies that are "innovative" or "emerging" or when the status of the technology is uncertain, and attach the Alternative Technology Approval Memo (see p. 42).

MODEL ACTION MEMO

4. EE/CA⁵

- Attach and refer to the EE/CA and the EE/CA Approval Memorandum for a discussion of alternative actions considered for non-time-critical removals (see p. 41) [1].
- Attach and refer to the written response to significant comments on the EE/CA and supporting documentation in the administrative record.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal

- List Federal ARARs identified for the site that are deemed practicable, if any.
Example: - *Federal ARARs determined to be practicable for the site are the Clean Water Act, the Toxic Substances Control Act, and the Endangered Species Act.*
- Explain, if necessary, that Federal ARARs were not considered before removal activities were undertaken during an emergency situation.

State

- ♦ • Describe efforts to identify State ARARs and indicate if State response has been timely.
Example: - *Received list of ARARs for XYZ site from State representatives within two weeks of request.*
- Where there has been time to assess State ARARs, list those which are deemed practicable.
Example: - *Proposed response will attain State water quality criteria.*
- Explain, if appropriate, that State ARARs were not identified or considered prior to removal initiation due to emergency circumstances.

6. Project schedule

- ♦ © Specify the time needed to perform the preventative, stabilizing, and/or mitigative (cleanup) response actions to the threats posed by the site, and how quickly response activities can begin.
- Show when the State/local/PRP/remedial program commitment to provide PRSC takes effect, if applicable [16].

B. Estimated Costs

- ♦ © Use the Removal Cost Management System (RCMS) [29] to summarize the estimated total project ceiling⁶ with a breakdown of costs highlighting the following categories:

⁵ This section applies only to non-time-critical removals.

⁶ The total project ceiling is the proposed removal total cost estimate added to the previously approved total project ceiling; i.e., the total of all approved project ceilings for a site.

Extramural costs coming out of the Regional allowance:⁷

- Emergency Response Cleanup Services (ERCS), Regional ERCS, sub-contractors, pre-qualified vendors and other site-specific contracts, letter contracts, order for services, notices to proceed, and interagency agreements (IAGs) with other Federal agencies such as the U.S. Coast Guard, Federal Emergency Management Agency, Bureau of Land Management, and Bureau of Land Reclamation.

Other extramural costs not funded from the Regional allowance:

- Technical Assistance Team (TAT), including multiplier costs⁸
- National Contract Laboratory Program (NCLP)
- Response Engineering and Analytical Contract (REAC).

EPA intramural costs. (Note: See the Removal Cost Management Manual for the formula for calculating intramural direct and indirect costs [27]. Contact the Regional Financial Officer for current direct and indirect cost rates to be used in the formula.)

Exhibit 5 shows a sample project ceiling estimate. (Note: Do not include any CERCLA section 104(b) investigatory costs in the estimate, because they do not count against the project ceiling or the \$2 million statutory limit.)

- Include contingencies⁹ in the cost estimate. Two contingencies should be supplied:
 - 10-20% contingency for Regional removal allowance costs, based on best engineering judgment.
 - 20% contingency applied to total extramural project costs (all costs but EPA intramural costs).
- Include the cost of previous CERCLA removal actions taken at the site (if applicable) considering expenditures in all areas described above. For actions approved prior to 1984, contact the appropriate Regional Coordinator at Headquarters to query the Financial Management System in order to determine costs other than extramural cleanup contractor expenditures. For more recently discovered sites, CERCLIS data reflects accurate total project ceilings.

⁷ Costs formerly referred to as "extramural cleanup contractor costs" are actually Regional removal allowance costs and should be referred to as such.

⁸ To cover administrative costs of the TAT program, an administrative multiplier, which includes overhead expenses, is applied towards all TAT expenses. This factor, available through the TAT leader or Zone Program Management Office, is multiplied by the sum of the personnel and expense amounts listed above, to estimate total TAT expenses for the removal action.

⁹ Contingencies allow for unforeseen expenses that may arise during a removal action (e.g., discovery of additional hazardous materials and delays resulting from poor weather conditions or equipment failure). Contingencies may be applied to either the extramural or intramural portion of the total project ceiling as needed.

EXHIBIT 5. SAMPLE REMOVAL PROJECT CEILING ESTIMATE * [29]

Extramural Costs:

Regional Allowance Costs:

Total Cleanup Contractor Costs	\$862,500
(This cost category includes OSC estimates for: ERCS, Regional ERCS, subcontractors, Letter Contracts, orders for services, Notices to Proceed, Alternative Technology Contracts, and IAGs with other Federal agencies. Also includes a 10-20% contingency.)	

Other Extramural Costs Not Funded From the Regional Allowance:

Total TAT, including multiplier costs	\$50,000
Total NCLP	\$100,000
Total ERT/REAC	<u>\$100,000</u>

Subtotal, Extramural Costs	\$1,112,500
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Extramural Costs Contingency (20% of Subtotal, Extramural Costs; round to nearest thousand)	<u>+ \$223,000</u>
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TOTAL, EXTRAMURAL COSTS	\$1,335,500
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Intramural Costs:

Intramural Direct Costs	\$9,900
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Intramural Indirect Costs	<u>\$18,000</u>
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TOTAL, INTRAMURAL COSTS	\$27,900
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TOTAL, REMOVAL PROJECT CEILING	\$1,363,400
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* Format and line items correspond to RCMS output.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

- ◆ • Describe any expected changes in the situation should action be delayed or not taken, such as changes in the scope or nature of contamination, increased threats, or the need for additional response actions. Include a worst-case scenario.
Examples:
 - *Contamination will most likely spread from the site to a nearby stream which serves as a municipal water supply.*
 - *Delayed action will increase public health risks to the adjacent population through prolonged exposure to airborne contaminants.*

VII. OUTSTANDING POLICY ISSUES

- ◆ • Discuss remaining policy issues not previously discussed, if applicable, or state "None" if no other policy issues are associated with the site.
Examples:
 - *Provisions for cost-sharing for the proposed response are an issue because EPA has decided to seek State cost-share under CERCLA section 104(c)(3)(ii).*
 - *The removal involves nationally significant and precedent-setting issues because it involves releases from consumer products on Indian Tribal lands.*
 - *The site comprises two noncontiguous sites located 1/4 mile apart.*

VIII. ENFORCEMENT

The purpose of an original Action Memo is to document the decision to undertake a removal action. For administrative purposes, the enforcement strategy is included with the original Action Memo.

As stated in NCP section 300.415(a)(2), EPA's policy concerning removal enforcement is that where PRPs are known, an effort shall be made, to the extent practicable, to determine whether they can and will perform the necessary removal action promptly and properly [28]. The urgency determination (emergency, time-critical, or non-time-critical), however, is a deciding factor in determining the amount of time that can be devoted to a PRP search and negotiations prior to on-site action. OSCs should be prepared to obtain the necessary approval to conduct a Fund-lead response if no PRPs can be identified. Efforts to locate PRPs, however, should continue throughout the removal action to support cost recovery efforts and possible PRP involvement in any future response actions.

- ◆ • Provide a summary statement indicating the extent to which PRPs are known, and whether they can and will perform the proposed response promptly and properly.
- ◆ • *Place all remaining information concerning the enforcement strategy in a separate addendum labelled "enforcement sensitive" and note here that the enforcement strategy is not part of the Action Memo for purposes of NCP consistency.*

IX. RECOMMENDATION

- ◆ • The following statement must appear in all Action Memos to document that the proposed response is in compliance with statutory and regulatory removal provisions:

MODEL ACTION MEMO

This decision document represents the selected removal action for the _____ site, in _____ (location), developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the site.

- ◆ • Provide an approval statement indicating that NCP removal requirements have been substantiated and stating the total project ceiling and the Regional removal allowance costs.
Example: - *Conditions at the site meet the NCP section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed removal action. The total project ceiling if approved will be \$1,363,400. Of this, an estimated \$862,500 comes from the Regional removal allowance.*
- ◆ © Include spaces for approval or disapproval signatures and dates.

ENFORCEMENT ADDENDUM:

- ◆ Type the site name and date on each enforcement addendum and label clearly "Enforcement Sensitive." The enforcement addendum must be detached from the Action Memo before placing the Action Memo in the administrative record file. Discuss the following topics in the addendum using the assistance of Regional enforcement staff to compile information [2, 3, 28]:

A. PRP Search

- Detail PRP search progress to date, including PRPs identified, their financial status, and how much waste they contributed to the site (volumetric contribution).
Examples: - *Title searches and examination of on-site accounting records are being conducted to identify PRPs.*
 - *The 104(e) information requests have been issued.*
 - *The PRP has failed to take part in removal actions.*
- Describe the PRP search strategy for the future, including the schedule and expedited components (if applicable).

B. Notification of PRPs of Potential Liability and of the Required Removal Action

- Indicate if notices have been sent, to whom, and the response of PRPs to date. (Note: notification is not always possible in emergency situations.)
Example: - *Fifty notice letters have been sent to identified PRPs.*
- Describe future notice activities planned and their implementation schedule.

C. Decision Whether to Issue an Order

- Discuss consideration of the primary factors affecting the decision to issue an order including the immediacy of the need to respond, evidence indicating PRP liability, and the financial ability of PRPs to respond.
Example: - *The agency has identified viable PRPs and has issued a Unilateral Administrative Order under section 106 of CERCLA.*

- Discuss consideration of the secondary factors affecting the decision to issue an order including the ability and need to precisely define the removal, willingness of the PRPs to conduct the removal (this is not dispositive), availability of the Fund, and technical problems such as the oversight/technical capabilities of the PRP.
Example: - Action is being taken under RCRA section 7003.
- Identify any other strategic concerns regarding the issuance of an order.

D. Negotiation and Order Issuance Strategy

- Discuss the timeline/deadline for issuance of an Administrative Order on Consent, the date for issuance of a Unilateral Administrative Order (UAO) if no settlement is reached, and the status of order drafting.
Example: - A 2-week timeframe for negotiations has been established starting June 1. If no agreement is reached, a UAO will be immediately issued.
- Indicate whether the appropriate State agency has been notified.
- Identify any access issues and how they have been addressed.
Example: - The site owner initially refused access to response personnel but has since relented.
- Describe the status of Statement of Work preparation.
Example: - The PRPs have contracted with a national cleanup firm, provided EPA with a copy of the work plan, and site investigation is underway.
- Discuss the availability and thoroughness of the documentation of past costs.

ATTACHMENTS

- Append attachments referred to in the body of the Action Memo.

ACTION MEMORANDA FOR SPECIAL CIRCUMSTANCES

Overview

In addition to requesting approval of an initial removal response, Action Memos are used to request ceiling increases, statutory exemptions, changes in the scope of response, or combinations of these categories. This section provides instructions on preparing the basic types of Action Memos used in special circumstances (i.e., combined removal and statutory exemption requests, 12-month exemption requests, ceiling increase requests, \$2 million exemption/ceiling increase requests, and requests for changes in the scope of response). For removal actions involving combinations of these scenarios, OSCs should consult the instructions for each type of request to ensure that all appropriate information is included.

Combined Removal and Statutory Exemption Requests

Overview

For removals of magnitude, an OSC can usually determine at the initiation of a response that an exemption to the statutory limitations under CERCLA will be needed [8]:

- To initiate a removal action where the project is expected at the outset to exceed 12 months¹⁰
- To initiate a removal action where the total project cost is expected at the outset to exceed \$2 million.

Action Memos that combine exemption requests with requests for initial approval of removal actions must contain the information discussed below, in addition to the information detailed in the model Action Memo provided in the preceding section. The new information described below should be inserted into the appropriate section of the model Action Memo, as indicated by the shaded portions of Exhibit 6. The section numbers shown below correspond to the basic Action Memo outline presented in Exhibit 4.

12-Month Exemption

An Action Memo requesting initial approval of a removal combined with a 12-month exemption request is used when the OSC can determine at the outset of the response that the removal action will exceed the statutory time limitation of 12 months [8]. Like the model Action Memo described in the preceding section, this Action Memo must be sent to the RA for approval, and addressed from the OSC through the Regional Division Director (as appropriate). In situations where an extension is sought for a proposed or final NPL site based upon the

¹⁰ The 12-month clock starts when on-site removal action response activity begins (not when the contractor is authorized) and runs for 12 consecutive months, including time that passes between restarts. CERCLA section 104(b) investigatory studies are not removal action response activities that count toward the 12-month time limit when they precede the initial start date.

**EXHIBIT 6. INFORMATION REQUIREMENTS FOR REMOVAL AND
12-MONTH OR \$2 MILLION EXEMPTION REQUEST
ACTION MEMOS**

Heading

I. Purpose

II. Site Conditions and Background

III. Threats to Public Health or Welfare or the Environment

IV. Endangerment Determination

V. Exemption from Statutory Limits

VI. Proposed Actions and Estimated Costs

VII. Outstanding Policy Issues

IX. Enforcement

X. Recommendation

Enforcement Addendum

Attachments

consistency exemption, the appropriate official in the Region's remedial program must also concur in writing (RAs are authorized to approve time exemptions based upon the consistency exemption for both NPL and non-NPL sites) [9].

\$2 Million Exemption

Action Memos that combine requests for an initial removal with an exemption from the \$2 million limitation are used when the OSC can determine at the outset of the response that the total cost of the removal action will exceed \$2 million [8]. Unlike the model Action Memo described in the preceding section, this combined Memo must be submitted to Headquarters for approval. ERD Regional Coordinators at Headquarters should be alerted to the need for Headquarters' approval as soon as possible. Where an exemption is sought for a proposed or final NPL site based upon the consistency exemption, the appropriate official in the Region's remedial program must also concur before the Action Memo is sent to Headquarters. [9].

The Action Memo, signed by the RA, must be addressed to the Assistant Administrator, Office of Solid Waste and Emergency Response (AA, OSWER) through the Director, Office of Emergency and Remedial Response (OERR) to the attention of the Director, ERD. The Memo should be sent to the appropriate Regional Coordinator at least three weeks before the exemption is needed. The Regional Coordinator will obtain the necessary Headquarters' concurrences and submit the Action Memo to the AA, OSWER for final approval. If additional Headquarters assistance is needed, OSCs are encouraged to send Action Memos earlier to avoid lengthening the three-week Headquarters' processing time. For example, OSCs may submit draft Action Memos to Headquarters for comment to expedite final processing. In an emergency situation, the OSC may obtain oral approval of a combined removal and statutory exemption request from the AA, OSWER, which must be followed by a written Action Memo within 48 hours.

SPECIAL CIRCUMSTANCES REMOVAL AND EXEMPTION REQUEST

ADDITIONS TO MODEL ACTION MEMO

In addition to providing the information described in the model Action Memo, the "Purpose" and "Recommendation" sections of the removal and exemption request Action Memo should be modified as discussed below. A new section on the exemption from statutory limits must also be added.

Purpose (Section I)

- Modify the "Purpose" statement described in the model Action Memo (p. 8) to specify a combined initial removal and 12-month or \$2 million exemption request.

Exemption from Statutory Limits (New section V: follows "Endangerment Determination")

- Place this section immediately following the "Threats" section and use the threat information to justify the need for a 12-month or \$2 million exemption [8]. Ensure that the severity of the threats is sufficiently documented to warrant the exemption request. Demonstrate that the removal meets one of the two CERCLA section 104(c) exemptions listed below (it is not necessary to justify both exemptions). The two CERCLA section 104(c) exemptions are commonly referred to as the "emergency exemption" and the "consistency exemption." Note that a higher threshold is used to evaluate emergency exemption requests than for responses within statutory limits or consistency exemptions. Therefore, OSCs must *ensure that all three components of the emergency exemption are sufficiently addressed* when requesting exemption from statutory limits.

A. Emergency Exemption:

1. **There is an immediate risk to public health or welfare or the environment**, the key word being immediate: focus on how soon the public or the environment is at risk or will be in the immediate future. Describe site conditions that constitute an immediate risk; indicate all hazardous substances involved, refer to and interpret tables of data, and define the immediacy of the risk to affected human populations and environmental resources. Discuss the time needed to address the hazards involved and adverse weather conditions that may exacerbate the situation. Make reference to and attach any final ATSDR findings. Refer to and interpret data contained in any attached tables that support the need for an exemption.

Examples:

- *The retaining wall for the lagoon is highly unstable and on the verge of collapse. Frequent rains expected in the next 4-6 weeks may hasten this collapse, which would cause approximately 20,000 gallons of waste contaminated with heavy metals to spill into Twining Creek, approximately 1/2 mile above the public water supply intake.*
- *Volatile and explosive substances (see Table 1 for names and estimated quantities) are contained in 43 rapidly deteriorating drums. Incompatible substances are stored next to, and on top of, each other, presenting a high risk of fire/explosion and subsequent spread of toxic fumes to the 25 homes within a 1/4 mile radius of the site.*

SPECIAL CIRCUMSTANCES REMOVAL AND EXEMPTION REQUEST

And

2. **Continued response actions are immediately required to prevent, limit, or mitigate an emergency**, the key words being emergency and continued response actions are immediately required: describe the emergency by referring to the release or threat of release of hazardous substances identified in the "Threats" section, citing specific concentrations, identifying deteriorating site conditions, and describing the type of threats. Ensure that each element of the response is justified by the emergency criteria and documented accordingly (be sure to include ATSDR health consultations/assessments/advisories that support an emergency finding). Explain the emergency consequences of not granting the exemption.

Examples:

- *The TCE-contaminated contents of two 5,000 gallon tanks will be drained and disposed of off-site. Continued actions are necessary, however, to dismantle and remove the rusting tanks so that toxic residues do not wash off-site into a neighboring stream.*
- *10 partially buried drums of dioxin-contaminated wastes were discovered during the emergency removal of 120 drums from the surface of the site. Some of the contents have already leaked into the surrounding soil, presenting a serious threat to residents of 18 neighboring homes and wildlife. Contaminated soil must be excavated and removed to eliminate risk of ingestion by neighborhood children or migrating wildlife.*

And

3. **Assistance will not otherwise be provided on a timely basis**, the key words being timely basis: describe why State/local governments cannot address the site within an appropriate timeframe. If applicable, cite the enforcement addendum for discussion of PRP's role. Discuss the remedial timeframe to address the site if it is listed on the NPL.

Examples:

- *A deteriorating storage shed threatens to expose explosive substances to the atmosphere, and local responders do not have appropriate expertise for safely mitigating the threat.*
- *Neither the State nor county government has access to or resources to acquire the proper incineration equipment and services needed.*

Or

B. Consistency Exemption¹¹:

1. **Continued response actions are otherwise appropriate and consistent with the remedial action to be taken**: Demonstrate that the proposed removal meets the criteria for consistency (at a minimum, the removal does not foreclose the remedial action) and appropriateness the activity is necessary to: avoid a foreseeable threat; or, prevent further migration of contaminants; or, use alternatives to land disposal; or, comply with the off-site policy [9, 18, 22]. Describe what Federal, State, or PRP-lead remedial actions are planned (citing the ROD if available), or anticipate likely remedial actions if plans are not yet made.

Example:

- *Excavating and removing the buried drums will not interfere with likely remedial alternatives to address soil and ground-water contamination. The removal action is also appropriate because the drums and their contents will be incinerated, not disposed of in a landfill.*

¹¹ This exemption is generally only for use at NPL sites. The limited situations where use of the exemption is appropriate for non-NPL sites will be determined by the AA, OSWER on a case-by-case basis [9].

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

Recommendation (Section IX)

- Refer to both removal criteria and statutory exemption criteria in a Regional recommendation statement. For Action Memos requiring Headquarters' approval, state when funding is planned and the source of funding.

Examples:

- *Conditions at the site meet the NCP section 300.415(b)(2) criteria for a removal and the CERCLA section 104(c) consistency exemption from the 12-month limitation, and I recommend your approval of the proposed removal action and 12-month exemption. The total project ceiling if approved will be \$125,000. Of this, an estimated \$100,000 will be from the Regional removal allowance.*
- *Conditions at the site meet the NCP section 300.415(b)(2) criteria for a removal and the CERCLA section 104(c) emergency exemption from the \$2 million limitation, and I recommend your approval of the proposed removal action and \$2 million exemption. The total project ceiling if approved will be \$4.5 million, of which an estimated \$3.8 million will be funded from FY 89 and FY 90 Regional removal allowances.*

Action Memoranda to Continue Response Actions

Overview

Action Memos are also occasionally required to continue work approved by an original Action Memo, or to restart work at the same site if the statutory limitation on time has been exceeded. The basic types of requests contained in these additional Action Memos are:

- To extend a removal action beyond 12 months
- To increase the total project ceiling
- To increase the total project ceiling beyond \$2 million
- To change the scope of response for the removal action.

General instructions for preparing these Action Memos are discussed in the following paragraph, followed by the specific information requirements for each type of request. Action Memos combining several types of requests must fulfill all appropriate information requirements.

Action Memos to continue response actions must cover each of the sections required in the basic Action Memo outline (see Exhibit 4), but may refer to the most recently approved Action Memo (which should be attached) to avoid duplication. *Specific points to consider in preparing exemption requests, ceiling increases, requests for changes in the scope of response, or other combinations thereof include the following:*

- The "Subject" line in the heading should specify the type of request (e.g., ceiling increase, \$2 million exemption, 12-month exemption, or change in the scope of response request) followed by the words "Action Memorandum" on the next line.
- If the Action Memo requires an extension of the 12-month limit or an increase in the project ceiling that raises costs over \$2 million, justification for the exemption must be presented in a new section, "Exemption from Statutory Limits." If previous

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

Action Memos were based upon different exemption criteria (e.g., the consistency exemption was used instead of the emergency exemption), the OSC must ensure that the new request contains appropriate and sufficient information. Additionally, if site conditions have changed from those documented in a previous exemption request but continue to meet the same exemption criteria, the new request must demonstrate that current conditions meet the same criteria.

- If the Action Memo requires a project ceiling increase or a redirection of funds, a detailed cost breakdown of previous and requested ceilings should be provided.
- For the remaining sections of Action Memos to continue response actions:
 - If information contained in the previous Action Memo is still current and correct, the OSC should indicate "Refer to previous Action Memo" for that section.
 - If new or additional information is available, the OSC should include it under the appropriate section number in the Action Memo and indicate that this supplements or supersedes information in previous Action Memos. Note that exemption requests based upon the emergency exemption will likely require expanded sections with updated information.

The discussion below identifies specific information requirements for ceiling increases, exemption requests, and changes in the scope of response request, as illustrated by the shaded portions of Exhibit 7. References to the appropriate section numbers in an original Action Memo, as outlined in Exhibit 4, are included.

12-Month Exemption

A 12-month exemption request Action Memo is required when it becomes necessary to extend the response time of an already-approved removal beyond the statutory limit of 12 months [8]. The 12-month exemption request, specifying the additional time required to complete the removal action, must be sent to the RA for approval and addressed from the OSC through the Regional Division Director (as appropriate). If a subsequent time exemption or change in scope of response is required, the new request must state that the removal continues to meet the original exemption criteria or demonstrate that new exemption criteria are met. Where an extension is sought for a proposed or final NPL site based upon the consistency exemption, the appropriate official in the Region's remedial program must also concur before the Action Memo is sent to Headquarters [9].

Additions to Model Action Memo

Where appropriate, the previous Action Memo should be referred to and the "Purpose," "Site Conditions and Background," "Threats," "Proposed Actions," and "Recommendation" sections should be modified as discussed below. Any updated or new information should be discussed under the appropriate heading. A section on the proposed exemption from statutory limits must also be included.

Purpose (Section I)

- Modify the "Purpose" statement described in the model Action Memo (p. 8) to specify that a 12-month exemption request is sought.

**SPECIAL CIRCUMSTANCES
ACTION MEMOS TO CONTINUE RESPONSE**

EXHIBIT 7. INFORMATION REQUIREMENTS FOR ACTION MEMOS TO CONTINUE RESPONSES	
<p>12-Month Exemption</p> <p>Heading</p> <p>I. Purpose</p> <p>II. Site Conditions and Background</p> <p>III. Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities</p> <p>IV. Endangerment Determination</p> <p>V. Exemption from Statutory Limits</p> <p>VI. Proposed Actions and Estimated Costs</p> <p>VII. Expected Change in the Situation Should Action Be Delayed or Not Taken</p> <p>VIII. Outstanding Policy Issues</p> <p>IX. Enforcement</p> <p>X. Recommendation</p> <p>Enforcement Addendum</p> <p>Attachments</p>	<p>Ceiling Increase*</p> <p>Heading</p> <p>I. Purpose</p> <p>II. Site Conditions and Background</p> <p>III. Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities</p> <p>IV. Endangerment Determination</p> <p>V. Proposed Actions and Estimated Costs</p> <p>VI. Expected Change in the Situation Should Action Be Delayed or Not Taken</p> <p>VII. Outstanding Policy Issues</p> <p>VIII. Enforcement</p> <p>IX. Recommendation</p> <p>Enforcement Addendum</p> <p>Attachments</p>
<p>\$2 Million Exemption/Ceiling Increase</p> <p>Heading</p> <p>I. Purpose</p> <p>II. Site Conditions and Background</p> <p>III. Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities</p> <p>IV. Endangerment Determination</p> <p>V. Exemption from Statutory Limits</p> <p>VI. Proposed Actions and Estimated Costs</p> <p>VII. Expected Change in the Situation Should Action Be Delayed or Not Taken</p> <p>VIII. Outstanding Policy Issues</p> <p>IX. Enforcement</p> <p>X. Recommendation</p> <p>Enforcement Addendum</p> <p>Attachments</p>	<p>Change in Scope of Response</p> <p>Heading</p> <p>I. Purpose</p> <p>II. Site Conditions and Background</p> <p>III. Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities</p> <p>IV. Endangerment Determination</p> <p>V. Proposed Actions and Estimated Costs</p> <p>VI. Expected Change in the Situation Should Action Be Delayed or Not Taken</p> <p>VII. Outstanding Policy Issues</p> <p>VIII. Enforcement</p> <p>IX. Recommendation</p> <p>Enforcement Addendum</p> <p>Attachments</p>

* All ceiling increase requests for removal actions with total project costs over \$2 million must state that the removal continues to meet previously documented statutory exemption criteria or demonstrate that the response meets other exemption criteria in a section on "Exemption From Statutory Limits."

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

Site Conditions and Background (Section II)

- Discuss who initiated the action, the date the action was approved in the original Action Memo, and the date response activities began on site.
- Describe the actions initially approved, actions to date, and actions to be completed.
Example: - *Of the three actions initially approved — staging of drums, soil excavation, final disposal at a RCRA-approved facility — all but disposal have been completed.*
- Describe the problems or conditions at the site that have led to the 12-month limit exemption request.
Examples: - *Severe flooding delayed cleanup work and exposed more drums.*
 - *Contract lab delays disrupted scheduled response activities.*

Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities (Section III)

- A new/revised/updated section is required if the 12-month exemption is needed to respond to threats that are different from those addressed in previous Action Memos. Section III of the model Action Memo (see p. 12) describes the information that should be included.

Exemption From Statutory Limits

(New Section V: follows “Endangerment Determination”)

- Demonstrate that the site meets either the emergency or consistency exemption according to the instructions in the discussion of the combined removal and exemption request Action Memo (see p. 28). *Remember that a higher threshold is used to evaluate the threats in an emergency exemption request than in an original Action Memo within statutory limits; therefore, substantiate the request accordingly [8, 9].* If a subsequent time extension or change in scope of work is needed, the new Action Memo must state that the removal continues to meet the original exemption criteria or demonstrate that new exemption criteria are met.

Proposed Actions and Estimated Costs

(Section V)

- Describe what actions are required to complete the removal action, addressing the same issues raised in the “Proposed Actions” section of the model Action Memo (see p. 16).
- Describe any ARARs that will be complied with as a result of the exemption request and address the same issues outlined in the “Proposed Actions” section of the model Action Memo (see p. 20).

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

Recommendation (Section IX)

- Provide an approval statement that briefly presents the rationale and time schedule for the removal.

Example: - Conditions at the site meet criteria for the CERCLA section 104(c) consistency exemption, and I recommend that you approve an exemption from the 12-month limit to allow a continued removal response. The total project ceiling is \$730,000, of which an estimated \$650,000 comes from the Regional removal allowance.

- Include any special conditions or provisions that pertain to this exemption.

Ceiling Increase

A ceiling increase Action Memo is used for approval of all ceiling increase requests. The RA can approve ceiling increases, addressed from the OSC, that do not result in total project costs over \$2 million. If the ceiling increase will bring the total project ceiling above \$2 million for the first time, the OSC should prepare a combined \$2 million exemption and ceiling increase (see p. 36). Requests for ceiling increases for projects already totalling over \$2 million require approval from Headquarters and must state that the removal still meets the same exemption criteria (i.e., emergency or consistency) specified in the original \$2 million exemption request/ceiling increase Action Memo or demonstrate that the response meets other exemption criteria. Therefore, all ceiling increases for projects totalling over \$2 million need to reiterate or demonstrate that exemption criteria are met.

Additions to Model Action Memo

Where appropriate, the original or most recent Action Memo should be referred to in order to avoid unnecessary duplication of information. The "Purpose," "Site Conditions and Background," "Threats," "Proposed Actions," and "Recommendation" sections should be modified as described below.

Purpose (Section I)

- Modify the "Purpose" statement described in the model Action Memo (p. 8) to specify that a ceiling increase is requested.

Site Conditions and Background (Section II)

- State the date action was approved in the original Action Memo and the date response activities began on site.

Example: - The removal was initiated by EPA on December 2, 1988.

- Discuss the present status of the removal action.

*Examples: - Actions already taken are staging and overpacking of drums, and pumping down lagoons.
- Drums currently awaiting disposal at a RCRA-approved disposal site.*

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

- Describe the site conditions and the reasons for a ceiling increase request.
Examples:
 - *Additional drums were discovered buried near the property lines.*
 - *Unexpected freezing temperatures required the use of specialized equipment.*
- Describe what the ceiling increase will be used for.
Example:
 - *Disposal of additional drums that washed ashore after the removal action began.*
- Describe a worst-case scenario should the ceiling increase not be granted.
- Include any other information that may help substantiate the need for a ceiling increase and attach any new enforcement information, ATSDR health advice, or other useful documents.

Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities (Section III)

- A new/revised/updated section is required if the ceiling increase will be used to respond to threats that are different from those addressed in previous Action Memos. Section III of the model Action Memo (see p. 12) describes the type of information that should be included in order to substantiate the request for a funding increase.

Exemption From Statutory Limits¹² (New Section V: follows "Endangerment Determination")

- State that site conditions continue to meet the exemption criteria (i.e., emergency or consistency exemption) specified in the original \$2 million exemption/ceiling increase Action Memo. If site conditions have changed but continue to meet the same criteria specified in the original exemption request, demonstrate here that the new conditions meet the exemption criteria. If site conditions do not continue to meet the same exemption criteria, the Action Memo must demonstrate that criteria for the other exemption are met according to the instructions for the combined exemption and removal request Action Memo (see p. 28). *Remember that a higher threshold is used to evaluate the threats in an emergency exemption request than in an original Action Memo within statutory limits; therefore substantiate the request accordingly [8, 9].*

Proposed Actions and Estimated Costs (Section V)

- Describe what actions are required to complete the response, addressing the same issues raised in the "Proposed Actions" section of the model Action Memo (see p. 16).
Example:
 - *Sampling for compatibility remains to be completed before final disposal may be undertaken.*

¹² This section is only required if a \$2 million exemption has been previously approved. Renumber subsequent sections as appropriate.

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

- Provide a detailed breakdown of costs for both the current and proposed ceiling (see Exhibit 8) [29].

Recommendation (Section IX)

- Present the Region's recommendations, rationale, and project costs in an approval statement. Summarize what the additional funds will be used for and state how much the approval would increase the total project ceiling. If the ceiling increase is for a removal with a total project ceiling of more than \$2 million, specify the exemption criteria met, the source of funding, and when funding is planned.

Examples:

- *Site conditions continue to meet the NCP section 300.415(b)(2) criteria for a removal, and I recommend your approval of the proposed ceiling increase of \$600,000. The total project ceiling if approved will be \$1,774,000, of which an estimated \$1,387,000 will be funded from the Regional removal allowance.*
- *Site conditions continue to meet the NCP section 300.415(b)(2) criteria for a removal and the CERCLA section 104(c) consistency exemption, and I recommend your approval of the proposed project ceiling increase of \$400,000. The total project ceiling if approved will be \$3.5 million, of which an estimated \$2.9 million will be funded from FY 89 and FY 90 Regional removal allowances.*

\$2 Million Exemption and Ceiling Increase

The \$2 million exemption request and ceiling increase Action Memo is used when a ceiling increase will bring the total project ceiling above \$2 million for the first time or when addressing new threats in subsequent ceiling increases [8]. This dual request Action Memo requires approval from Headquarters, and must be addressed to the AA, OSWER from the RA, through the Director, OERR to the attention of the Director, ERD. In situations where an exemption is sought for a proposed or final NPL site based upon the consistency exemption, the appropriate official from the Regional remedial program must also concur [9].

Additions to Model Action Memo

Where appropriate, the original or most recent Action Memo should be referred to in order to avoid unnecessary duplication of material. Additionally, the combined exemption and ceiling increase Action Memo should contain the information discussed below.

Purpose (Section I)

- Modify the "Purpose" statement provided in the model Action Memo (p. 8) to request a combined \$2 million exemption and ceiling increase.

Site Conditions and Background (Section II)

- Provide the same information as detailed for the ceiling increase Action Memo (see p. 34).

**SPECIAL CIRCUMSTANCES
ACTION MEMOS TO CONTINUE RESPONSE**

EXHIBIT 8. SAMPLE PROJECT CEILING INCREASE ESTIMATE [27]

<u>Extramural Costs</u>	<u>Current Ceiling</u>	<u>Costs to Date</u>	<u>Proposed Ceiling</u>
<u>Regional Allowance Costs:</u>			
(This cost category includes OSC estimates for: ERCS, Regional ERCS, subcontractors, Letter Contracts, order for services, Notices to Proceed, Alternative Technology Contracts, and IAGs with other Federal agencies. Also includes a 10-20% contingency)	\$837,000	\$825,000	\$1,387,000
<u>Other Extramural Costs Not Funded From the Regional Allowance:</u>			
Total TAT, including multiplier costs	\$10,000	\$5,000	\$10,000
Total NCLP	\$20,000	\$15,000	\$20,000
Total ERT/REAC	<u>\$20,000</u>	<u>\$15,000</u>	<u>\$20,000</u>
Subtotal, Extramural Costs	\$887,000	\$860,000	\$1,437,000
Extramural Costs Contingency (20% of Subtotal, Extramural Costs; round to nearest thousand)	<u>\$177,000</u>	<u>\$172,000</u>	<u>\$287,000</u>
TOTAL, EXTRAMURAL COSTS AND CONTINGENCY	\$1,064,000	\$1,032,000	\$1,724,000
<u>Intramural Costs:</u>			
Intramural Direct Costs (HQ and Region)	\$17,000	\$16,000	\$19,000
Intramural Indirect Costs	<u>\$33,000</u>	<u>\$30,000</u>	<u>\$34,200</u>
TOTAL PROJECT CEILING	\$1,114,000	\$1,078,000	\$1,777,200

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities (Section III)

- A new/revised/updated section is required if the \$2 million exemption and ceiling increase will be used to respond to threats that are different from those addressed in previous Action Memos. Section III of the model Action Memo (see p. 12) describes the information that should be included.

Exemption from Statutory Limits (New Section V: follows "Endangerment Determination")

- Place this section immediately following the "Threats" section and use the threat information to justify the need for a \$2 million exemption. Ensure that the severity of the threats is sufficiently documented to warrant the exemption request (*remember that a higher threshold is used to evaluate the threats in an emergency exemption request than in an original Action Memo*). Demonstrate that the removal meets either the emergency or consistency exemption under CERCLA section 104(c). See the exemption section of the combined removal and exemption request (p. 28) for \$2 million exemption documentation requirements [8, 9].

Proposed Actions and Estimated Costs (Section V)

- Refer to the "Proposed Actions" section of the ceiling increase Action Memo discussed previously (see p. 35) and Exhibit 8 for documentation requirements.

Recommendation (Section IX)

- Present the Region's recommendations, rationale, and project costs in an approval statement. Identify the source of funding and when funding is planned.
Example: - *Conditions at the site meet criteria for a CERCLA section 104(c) emergency exemption, and I recommend your approval of an exemption from the \$2 million limitation and a ceiling increase of \$500,000. The total project ceiling if approved will be \$4.2 million, of which an estimated \$3.7 million will be funded from the FY 89 and FY 90 Regional removal allowances.*

Change In The Scope Of Response

The request for a change in the scope of response is used when the proposed actions and/or removal response goals have changed from those outlined in the "Proposed Action" section of the current Action Memo. The format provided below is used when there is a change in the scope of work and redirection of funds at a site, but **no change** in total project ceiling. This Action Memo should be sent for approval to the RA from the OSC through the Regional Division Director (as appropriate), unless the removal was initially or subsequently (in the case of a \$2 million exemption request) approved by Headquarters. In these two instances, Headquarters' approval is required, and the Action Memo should be routed in the same way as a \$2 million exemption request. When a

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

change in the scope of response is required for an approved removal action totalling more than \$2 million, the Action Memo requesting the change must state that the statutory exemption criteria are still met.

Additions to Model Action Memo

Where appropriate, refer to the original or most recent Action Memo. Additional modifications to the "Purpose," "Site Conditions and Background," "Threats," "Proposed Actions," and "Recommendation" sections are discussed below.

Purpose (Section I)

- Modify the "Purpose" statement provided in the model Action Memo (p. 8) to specify that a change in the scope of response is requested.

Site Conditions and Background (Section II)

- Detail key site characteristics such as location, current conditions, and NPL status. Attach the original Action Memo and refer to it as appropriate in order to avoid repeating site description information used to describe the same threats in the original Action Memo.
- Discuss who initiated the action, the date the action was approved in the original Action Memo, and the date response activities began on site.
- Describe the conditions or situations that have led to the proposed change in the scope of the response.
Example: - Initially incineration was identified as the sole method of treatment and disposal, but tests have shown that incineration is not feasible for all the waste, so some of the waste will be solidified on-site.
- Include a chronological description of steps taken to address the conditions or situations leading to this request.
- Identify any key problems or complications that have developed or are anticipated.

Threats to Public Health or Welfare or the Environment, and Statutory and Regulatory Authorities (Section III)

- A new/revised/updated section is required if the change in the scope of response is needed to respond to threats that are different from those addressed in previous Action Memos. Section III of the model Action Memo (see p. 12) describes the type of information that should be included.

Proposed Actions and Estimated Costs (Section V)

- List and describe all the approved project tasks remaining to be accomplished for completion of the removal action.

SPECIAL CIRCUMSTANCES ACTION MEMOS TO CONTINUE RESPONSE

- Describe any ARARs that will be complied with as a result of the proposed change in work, addressing the same issues outlined in the "Proposed Actions" section of the model Action Memo (see p. 20).
- State that the costs will remain within the current approved total project ceiling (no separate cost summary is required).

Recommendation (Section IX)

- State that the response continues to meet NCP removal criteria and present the OSC's recommendations for a redirection of approved funds in an approval statement.

Example: - *Conditions at the site continue to meet the NCP section 300.415(b)(2) criteria for a removal, and I recommend your approval for redirection of funds as indicated. Specifically, I recommend that the TAT and CLP portions of the total project ceiling be re-established at \$25,000 and \$20,000, respectively, with no increase in the total project ceiling.*

ACTION MEMORANDA SUPPLEMENTS

Action Memoranda Attachments

The proper use of attachments can save time in preparing Action Memos as well as increase the effectiveness of the Action Memo as the primary decision document for removal activities. While certain attachments are required for approval of the Action Memo, the OSC may utilize other existing material or easily created attachments to enhance the overall clarity and usefulness of this document. The relevance of and information contained in all scientific documents must be explained and summarized within the body of every Action Memo.

Required Attachments

The following documents must be attached to the Action Memo and referred to as indicated:

- EE/CA Approval Memo and the EE/CA: To avoid repetition of information and for organizational purposes, OSCs must attach and refer to the EE/CA and its approval memo. EE/CAs are required for all non-time-critical removals [1].
- Written response to significant comments: This document must be attached to the Action Memo and referred to in the "Proposed Actions" section (see p. 16). If a public comment period was held pursuant to section 300.820(b) of the NCP (required for all non-time-critical removals), the Action Memo must document that significant comments were considered. A written response to all significant comments must be included in the administrative record and may be appended to the Action Memo after the comment period closes [21].
- Final ATSDR Health Advisories and Health Consultation Memos or other health advice: If the OSC has received such information, it must be attached and referred to in the "Threats" section of the Action Memo (see p. 12).
- Enforcement information: This addendum includes information described on p. 24. The addendum must be attached and referred to, and may be prepared by enforcement personnel [28].
- Concurrence Memo for Nationally Significant or Precedent-Setting Actions: If necessary, this approval memo must be attached and referred to in the "Outstanding Policy Issues" section (see p. 23) [14].

Recommended Attachments

In addition to the required attachments, OSCs are encouraged to use other documentation to substantiate their findings presented in the Action Memo. Suggested attachments include:

- Administrative Record Index: The Index may be attached and referred to in the "Site Conditions and Background" section (see p. 8) [21].

- **Previously approved Action Memos:** If other Action Memos have been approved for the site, they should be attached and referred to where appropriate to avoid unnecessary duplication of information (see the discussions on Action Memos for special circumstances, pp. 30 - 40).
- **Alternative Technology Approval Memorandum:** As with the EE/CA, OSCs may attach the approval memorandum for the use of alternative technologies to assist the reviewer. Approval is required for innovative or emerging technologies, or when the development status of a technology is uncertain [18].
- **Documentation of site characteristics:** These may be hand-drawn or professionally produced pictures, photographs, diagrams, maps, or other illustrations of the area around the site, the site itself, and prominent site features related to the incident or its response. These documents may be referred to where appropriate in the "Site Conditions and Background" section of the Action Memo (see p. 8).
- **Sampling results:** This includes charts, graphs, or other forms of documentation indicating the extent of contamination based upon sampling results, such as PA, SSI, or LSI reports. All data presented either in the Action Memo or in an attachment must be discussed and their relevance to the removal fully explained. If a chart is used, identify in column format the substance, quantity, location, and existing standards. The attachment should be referred to in the "Site Conditions and Background" section of the Action Memo (see p. 8).
- **Project schedule:** Charts can be used to illustrate various tasks and their anticipated duration (to avoid potential problems, the OSC might measure the time in terms of number of days instead of specific dates). The schedule should be referred to in the "Proposed Actions" section of the Action Memo (see p. 20).
- **Soil and debris treatability variances:** Generally, a request for a treatability variance for contaminated soil and debris is a memorandum attached to the Action Memo. When insufficient information exists about the need for a variance at the time the Action Memo is signed, the Action Memo should be amended to include the request for the variance when information becomes available. For non-time-critical actions, the information to justify a variance should be included in a memorandum attached to the EE/CA. In all cases, public comment on treatability variances should be solicited whenever possible, in accordance with NCP requirements.
- **Delisting evaluation:** If delisting of hazardous wastes is viable at a site, the technical basis for the delisting should be included in an addendum to the Action Memo. The evaluation should consider all identified RCRA wastes and discuss the reasons why the wastes should be disposed of as solid wastes (pursuant to RCRA Subtitle D requirements).

If other information is readily available and, based on professional judgment, the OSC believes the attachments will strengthen or clarify the material presented in the Action Memo, the use of additional attachments is encouraged.

Role of Headquarters Addenda

Occasionally it is necessary to make minor modifications to Action Memos submitted to Headquarters that do not require the development of an entirely new original Action Memo, exemption request, ceiling increase, or a request for a change in the scope of work. Addenda

ACTION MEMO SUPPLEMENTS

are succinct documents issued from Headquarters that clarify and supersede certain parts of the Action Memo by:

- Providing supplemental information to clarify or elaborate upon the need for a removal action
- Revising wording to avoid misinterpretation
- Incorporating new information to reflect a change in the situation since the submission of the Action Memo to Headquarters.
- Providing partial approval of a proposed removal action (i.e., approval for less than the requested amount).

Addenda are addressed from the Director, ERD, to the AA, OSWER, through the Director, OERR, and conclude with an approval statement similar to that of the Action Memo. The AA, OSWER, signs the addendum, not the original Action Memo, to signify approval of the request. These addenda are not intended to serve a quality assurance/control function. Regional staff should ensure that Action Memos are accurate and complete before forwarding them to Headquarters.

REVIEW AND APPROVAL PROCEDURES

Need for Review

Because judicial review is limited to the contents of the administrative record, and the Action Memo is the primary decision document used to initiate removals, the importance of a thorough review process cannot be overstated. Thorough review procedures are needed to ensure that the Action Memo sufficiently and accurately justifies the decision to undertake a removal. Careful reviews can also avert unnecessary delays due to typographical errors, organizational problems, and other minor errors.

Each Region should allot time for adequate review of the Action Memo (based on the exigencies of the situation) and adhere to a consistent review process. In addition to a thorough proofreading for typographical errors and other minor problems, OSCs should refer to the checklist provided in Exhibit 9 to ensure that the Action Memo is sufficient for administrative record purposes.

State-lead actions

OSCs also need to plan for the additional time required for intergovernmental review (IGR) of Action Memos for State-lead removals.¹³ Funds will not be obligated until State representatives have had an opportunity to comment on the proposed removal in accordance with their review process. IGR should be initiated at least one quarter prior to the obligation of funds for a removal and should take place concurrently with cooperative agreement application development and review. OSCs should plan accordingly for the additional review time required for State-lead actions [17].

Resources for Review

When possible, the OSC should have an outside reviewer examine the document from a fresh perspective. This will help the OSC evaluate the Action Memo as a sufficient decision document. Two valuable resources an OSC has for review are Regional Counsels and the ERD Regional Coordinators.

OSCs should have Regional Counsel or enforcement staff review the "Enforcement" section of all Action Memos as time permits. In particular, Regional enforcement personnel should review Action Memos requiring Headquarters' concurrence and approval as well as 12-month exemption requests. With the increasing emphasis on removal enforcement, OSCs must ensure that each Action Memo contains sufficient detail on enforcement activities to justify funding a removal [28].

¹³ Under 40 CFR Part 29, States with established review processes are required to issue formal notice to their designated State contacts, directly affected governmental entities, and Regional/areawide planning agencies that they are seeking Federal assistance.

EXHIBIT 9. REVIEW CHECKLIST

The following checklist has been developed to help ensure that all types of Action Memos are complete. A comprehensive list of topics for inclusion in original Action Memos is provided, with additional information requirements for Action Memos for special circumstances listed as well. OSCs should review all Action Memos against the checklist and add their own procedures if they desire.

Removal Request:

The Action Memo has:

- ☐ Provided a statement of purpose (section I).*
- ☐ Indicated if the response was initiated under the OSC's \$50,000 authority (section I).
- ☐ Described the site thoroughly and accurately and includes:
 - Location
 - NPL status
 - Past and present uses (section II).*
- ☐ Identified the proper CERCLA response authority (section II).*
- ☐ Indicated if a Federal facility is involved (section II).
- ☐ Indicated if a State or local government body is an owner or operator (section II).
- ☐ Identified the materials on site (section II).*
- ☐ Stated whether the materials are hazardous substances, pollutants or contaminants (section II).*
- ☐ Described the migration patterns of the substances involved (section II).*
- ☐ Indicated the State and local authorities' past, current, and likely future involvement, and funding capabilities (section II).
- ☐ Described any previous or current actions by the Federal Government or private parties (section II).

* Denotes information required for all Action Memos. Other items should be discussed as appropriate, given site circumstances.

REVIEW PROCEDURES

EXHIBIT 9(2). REVIEW CHECKLIST

Removal Request (continued)

- ___ Identified and discussed threats to public health or welfare or the environment in relation to NCP criteria (section III).
- ___ Incorporated an appropriate endangerment determination based upon the substances involved (section IV).*
- ___ Described tasks involved in the proposed response (section V).*
- ___ Substantiated the need for a removal by addressing the threats found at the site (section V).*
- ___ Identified the need to defer decisions pending further information (section V).
- ___ Referred to the sampling QA/QC plan for further information concerning site sampling plans (section V).*
- ___ Discussed the need for institutional controls (section V).
- ___ Indicated compliance with the off-site disposal policy (section V).*
- ___ Discussed commitments to provide post-removal site control (section V).
- ___ Stated the contribution to efficient performance of remedial actions (section V).*
- ___ Indicated consideration of alternative actions and technologies (section V).
- ___ Attached and referred to the EE/CA for an analysis of alternative actions (section V).
- ___ Discussed the effort to identify ARARs and listed those deemed practicable (section V).*
- ___ Summarized the estimated total project ceiling with a breakdown of the costs involved (section V).*
- ___ Described the expected change in the situation should action be delayed or not taken (section VI).*
- ___ Identified important policy issues (section VII).

* Denotes information required for all Action Memos. Other items should be discussed as appropriate, given site circumstances.

EXHIBIT 9(3). REVIEW CHECKLIST

Removal Request (continued)

- ___ Provided a summary statement indicating the extent of PRP involvement in the proposed response action (section VIII).*
- ___ Provided a recommendation statement and spaces for signatures and date (section IX).*
- ___ Identified the strategy for and results of the PRP search and notification process (Enforcement Addendum).*
- ___ Discussed consideration of the factors affecting the decision to issue an order (Enforcement Addendum).
- ___ Described the negotiation and order issuance strategy and schedule (Enforcement Addendum).
- ___ Appended all attachments.

Removal and Exemption Request:

- ___ Provided a specific statement of purpose (section I).*
- ___ Substantiated the need for 12-month and/or \$2 million exemption based upon the emergency or consistency exemptions (new section V).*
- ___ Provided a specific recommendation statement and documented the approval of appropriate program managers (section X).*

12-Month Exemption Request:

- ___ Provided a specific statement of purpose (section I).*
- ___ Described previous actions and current problems (section II).*
- ___ Discussed any new threats to public health, welfare, or the environment as they relate to NCP criteria (section III).
- ___ Demonstrated that the site meets the emergency or consistency exemption requirements (section V).*
- ___ Described remaining actions (section VI).*

* Denotes information required for all Action Memos. Other items should be discussed as appropriate, given site circumstances.

EXHIBIT 9(4). REVIEW CHECKLIST

12-Month Exemption Request (continued)

- ___ Described any ARARs that will be complied with as a result of the exemption request (section VI).
- ___ Provided a specific recommendation statement and documented approval of appropriate program managers (section X).*

Ceiling Increase Request:

- ___ Provided a specific statement of purpose (section I).*
- ___ Described previous actions and current problems (section II).*
- ___ Describe what the ceiling increase will be used for (section II).*
- ___ Discussed any new threats to public health, welfare, or the environment as they relate to NCP criteria (section III).
- ___ Demonstrated that the site meets emergency or consistency exemption requirements if a \$2 million exemption has been granted previously (section V, if applicable).
- ___ Described remaining actions (section V).*
- ___ Summarized costs of the current and proposed ceilings (section V).*
- ___ Provided a specific recommendation statement and documented approval of appropriate program managers (section IX).*

\$2 Million Exemption and Ceiling Increase Request:

- ___ Provided a specific statement of purpose (section I).*
- ___ Described previous actions and current problems (section II).*
- ___ Described what the ceiling increase will be used for (section II).*
- ___ Discussed new threats to public health, welfare, or the environment as they relate to NCP criteria (section III).

* Denotes information required for all Action Memos. Other items should be discussed as appropriate, given site circumstances.

EXHIBIT 9(5). REVIEW CHECKLIST

\$2 Million Exemption and Ceiling Increase Request (continued)

- ☐ Demonstrated that the site meets the emergency or consistency exemption requirements (section V).*
- ☐ Described remaining actions (section VI).*
- ☐ Summarized costs of the current and proposed ceilings (section VI).*
- ☐ Provided a specific recommendation statement and documented approval of appropriate program managers (section X).*

Change in the Scope of Response Request:

- ☐ Provided a specific statement of purpose (section I).*
- ☐ Described previous actions and current problems (section II).*
- ☐ Discussed any new threats to public health, welfare, or the environment as they relate to NCP criteria (section III).
- ☐ Described remaining actions (section V).*
- ☐ Described any ARARs that will be complied with as a result of the proposed change in work (section V).
- ☐ Stated that costs will remain within the current project ceiling (section V).*
- ☐ Provided a specific recommendation statement and documented approval of appropriate program managers (section IX).*

* Denotes information required for all Action Memos. Other items should be discussed as appropriate, given site circumstances.

REVIEW PROCEDURES

OSCs can also contact their Regional Coordinators in ERD for advice and assistance throughout the removal process. OSCs are strongly encouraged to submit \$2 million exemption requests for Regional Coordinator review. In addition, the OSC should notify the Coordinator of forthcoming exemption requests as soon as possible following the determination that an exemption will be needed.

Approval and Concurrence Procedures

The required approval and concurrence procedures for Action Memos are determined by two factors:

- The type of action being requested (e.g., an initial removal action, 12-month exemption, \$2 million exemption, or change in the scope of response)
- The unique circumstances for each removal (e.g., use of alternative technology, involvement of nationally significant or precedent-setting issues, use of the consistency exemption, invoking of the OSC's \$50,000 authority).

Exhibit 3 (see p. 4) details approval and concurrence responsibilities at both the Regional and Headquarters levels.

Regions

The RA or the Division Director, in Regions where authority has been delegated according to Delegation 14-1-A, must approve the following removal actions by signing all final Action Memos: initial removals costing up to \$2 million, 12-month exemption requests, ceiling increases up to \$2 million, and changes in the scope of response for removals costing up to \$2 million. In addition to RA approval, when the consistency exemption is used and the site in question is proposed for or listed on the NPL, the appropriate official in the Region's remedial program must concur in writing [9].

Procedures for obtaining the necessary approvals and concurrences from Regional personnel vary among Regions. OSCs should check with program managers to determine existing procedures for obtaining RA concurrence and coordinating with the remedial program (if necessary).

Headquarters

The AA, OSWER must approve all \$2 million exemption requests and subsequent ceiling increases [8]. The AA, OSWER also determines whether or not the use of the consistency exemption to exceed the \$2 million limit at non-NPL sites is appropriate on a case-by-case basis [9]. In addition to the AA, OSWER, OWPE and the Office of General Counsel (OGC) concur on \$2 million exemption requests.¹⁴ Exemption requests will not be approved if there has not been adequate enforcement effort to obtain responses from PRPs.

¹⁴ OGC concurrence is not required for ceiling increase requests that do not involve a change in the scope of response.

In addition to exemption requests, two other actions require Headquarters approval or concurrence. The Director, OERR must concur on nationally significant or precedent-setting removal actions at non-NPL sites. Exhibit 10 provides a sample of the concurrence memo that must accompany all Action Memos involving nationally significant or precedent-setting issues [14]. The Director, ERD must approve the use of innovative or emerging alternative technologies, or cases where the development status of a proposed technology is uncertain. Approval of alternative technologies may be required prior to preparing the Action Memo because treatability studies may be necessary in advance of implementing the response [18].

Action Memos requiring Headquarters' approval should be sent to the appropriate Regional Coordinator in ERD at least three weeks before the requested action is needed (and after appropriate Regional signatures have been obtained). OSCs can contact their Regional Coordinator at 8-382-2188 during regular working hours for assistance with Action Memos.

The Regional Coordinator will obtain the necessary program concurrences and submit the Action Memo to the AA, OSWER for final approval. If additional Headquarters' assistance is needed, OSCs are encouraged to send final Action Memos to Regional Coordinators more than three weeks in advance in order to avoid lengthening Headquarters' processing time.

REVIEW PROCEDURES

EXHIBIT 10. CONCURRENCE FOR NATIONALLY SIGNIFICANT OR PRECEDENT-SETTING REMOVALS

Subject: Request for Concurrence on Proposed Nationally Significant or Precedent-Setting Removal

From: Regional Administrator

To: Director
Office of Emergency and Remedial Response

The purpose of this memorandum is to request your concurrence on the proposed removal action at the _____ non-NPL site in [location]. Redlegation of Authority R-14-1-A gives you the authority to concur on nationally significant or precedent-setting removals at non-NPL sites.

The OSC has discussed this proposed removal with staff of the HQ Emergency Response Division. ERD has advised the OSC that this removal is considered nationally significant or precedent-setting because _____

The action memorandum is attached for your review. My approval awaits your concurrence.

Concur:

Director, Office of Emergency and Remedial Response

Date

According to the redelegation, authority to non-concur remains with the Assistant Administrator, OSWER. If you choose not to concur on this action, please forward this memo to the Assistant Administrator.

Non-Concur:

Assistant Administrator for Solid Waste
and Emergency Response

Date

Concur:

Assistant Administrator for Solid Waste
and Emergency Response

Date

APPENDIX A. REFERENCES¹⁵

Guidance

- [1] "Engineering Evaluation/Cost Analysis Guidance Outline," Memorandum from T. Fields to Superfund Branch Chiefs (March 30, 1988)
- [2] "Guidance on Use and Enforcement of CERCLA Information Requests and Administrative Subpoenas" (August 25, 1988)
- [3] "Interim Guidance on Notice Letters, Negotiations, and Information Exchange," Memorandum from J. Winston Porter to Regional Administrators (October 19, 1987)
- [4] "New Method for Determination of Indirect Costs in Superfund Removal Project Ceilings," Comptroller Policy Announcement No. 87-15 (July 15, 1987)
- [5] OSWER Dir. 9280.0-02B, "Policy on Floodplains and Wetlands Assessments for CERCLA Actions" (August 6, 1988)
- [6] OSWER Dir. 9330.2-07, "Notification of Out-of-State Shipment of Superfund Site Wastes" (September 14, 1989)
- [7] OSWER Dir. 9360.0-8, "Removal Actions at Methane Release Sites (Release of 'Naturally Occurring' Substances)" (January 23, 1986)
- [8] OSWER Dir. 9360.0-12, "Guidance on Implementation of the Revised Statutory Limits on Removal Actions" (April 6, 1987)
- [9] OSWER Dir. 9360.0-12A, "Guidance on Implementation of the 'Consistency' Exemption for Removals" (June 12, 1989)¹⁶
- [10] OSWER Dir. 9360.0-13, "Guidance on Implementation of the 'Contribute to Remedial Performance' Provision" (April 6, 1987)
- [11] OSWER Dir. 9360.0-15, "The Role of Expedited Response Actions Under SARA" (April 21, 1987)
- [12] OSWER Dir. 9360.0-16, "Interim Guidance for Conducting Federal-Lead Underground Storage Tank Corrective Actions" (June 4, 1987)
- [13] OSWER Dir. 9360.0-18, "Removal Program Priorities" (March 31, 1988)
- [14] OSWER Dir. 9360.0-19 (supplement), "Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent-Setting Issues" (March 3, 1989)
- [15] OSWER Dir. 9360.1-01, "Interim Final Guidance on Removal Action Levels at Contaminated Drinking Water Sites" (October 6, 1987)

¹⁵ Bracketed numbers appear throughout the text and correspond to the references listed in this appendix. These references may be consulted for additional information on specific topics affecting the preparation and content of Action Memos.

¹⁶ Draft document.

- [16] OSWER Dir. 9360.2-02, "Policy on Management of Post-Removal Site Control"¹⁷
- [17] OSWER Dir. 9375.1-4-W, "Guidance for State-Lead Removal Actions" (July 10, 1987)
- [18] OSWER Dir. 9380.2-1, "Administrative Guidance for Removal Program Use of Alternatives to Land Disposal" (August 1988)
- [19] OSWER Dir. 9832.1, "Cost Recovery Actions Under CERCLA" (August 1983)
- [20] OSWER Dir. 9832.13, "The Superfund Cost Recovery Strategy" (July 29, 1988)
- [21] OSWER Dir. 9833.3A, "Interim Guidance on Administrative Records for Selection of CERCLA Response Actions" (March 1, 1989)
- [22] OSWER Dir. 9834.11, "Revised Procedures for Implementing Off-Site Response Actions" (November 13, 1987)
- [23] "Policy on Use of Institutional Controls at Hazardous Waste Sites," Memorandum from E. LaPointe to H. Longest et. al. (October 28, 1988)
- [24] "Use of Removal Authority to Completely Clean Up NPL Sites," Memorandum from T. Fields to Regional Branch Chiefs (January 29, 1988)

Manuals

- [25] CERCLIS Applications for the Removal Program, Emergency Response Division, Office of Emergency and Remedial Response (October 1988)
- [26] OSWER Dir. 9234.1-01 and -02, CERCLA Compliance With Other Laws Manual, Parts I and II, Publications 540/G-89/006 and 540/G-89/009 (August 1988 and 1989)¹⁷
- [27] OSWER Dir. 9360.0-02B, Removal Cost Management Manual (April 1988)
- [28] OSWER Dir. 9837.2, Enforcement Project Management Handbook (July 1989)
- [29] Removal Cost Management System User's Guide, Version 3.2 (June 1989)
- [30] Superfund Indirect Cost Manual for Cost Recovery Purposes, Office of the Comptroller, Office of Administration and Resources Management (March 1986; updated 1/5/87 and 12/17/87)

Statutes and Regulations

The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 USC Sections 9601-9675

The National Oil and Hazardous Substances Pollution Contingency Plan, 55 FR 8666-8865 (March 8, 1990)

¹⁷ Draft document.

APPENDIX B. KEY WORDS INDEX

Action levels.....	13
Addenda	
Enforcement.....	5, 7, 23-25, 29, 41, 47
Headquarters	4, 5, 42-43
Administrative Record.....	1-3, 20, 24, 41
Alternative technologies.....	4, 19, 42, 46, 50-51
Action Memos	
Ceiling increase request.....	1, 26, 30, 32, 34-37, 48
Change in the scope of response request.....	1, 26, 30, 32, 38-40, 49
Enforcement	4-5
Removal and exemption request	1, 6, 26-30, 47
Removal request	1, 6-25, 45-47, 50
12-month exemption request	1, 4, 26, 30-34, 44, 47-48, 50
\$2 million exemption request.....	1, 4, 26, 30, 32, 36-38, 48-50
ATSDR.....	11, 13, 28-29, 35, 41
Approval procedures	3-5, 24, 26-27, 31, 34, 36, 38, 41, 50-51
ARARs.....	7, 20, 33, 40, 46, 48-49
Attachments.....	3, 7, 25, 41-42
CERCLIS.....	vii, 3, 8, 21
Concurrence procedures	3-5, 26-27, 31, 36, 41, 50-52
Enforcement	
Addenda.....	5, 7, 23-25, 29, 41, 47
Enforcement-lead response	4-5
EE/CA.....	2-3, 7, 18, 20, 41-42, 46
Exemption criteria	
Consistency exemption.....	27-31, 33-36, 38, 47-50
Emergency exemption.....	13, 27-31, 33-35, 38, 47-49
Federal facilities.....	9, 45
Headquarters' roles.....	4-5, 42-43, 50-52
Institutional controls.....	17, 46
National Priorities List	4, 7-8, 10-11, 18-19, 26-27, 31, 36, 39, 45, 50-52

Nationally significant or precedent-setting issues	4, 6, 8, 23, 41, 51-52
Office of General Counsel	4, 50
Office of Regional Counsel	3-4, 44
Off-site policy	17-18, 29, 46
OSC's \$50,000 authority	1, 4, 6, 8, 45, 50
Post-removal site control	18, 20, 46
Project ceiling	16, 20-22, 36-38, 40, 46, 48-49
Project schedule	7, 16, 20, 42
Proposed actions	7, 16-22, 33, 35-40, 46-49
Regional Coordinators	4-5, 27, 44, 50-51
Review procedures	3-4, 44-50
Sampling	10, 17, 42, 46
State/local roles	7, 10, 12, 17-18, 44
Threats to health, welfare, and environment	7, 12-16, 32-33, 35, 38-39, 46-49

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